Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of   )
) CC Docket No. 88-2
Filing and Review of Open   ) Phase I
Network Architecture Plans   )

SIX-MONTH REPORT OF U S WEST COMMUNICATIONS, INC.

I. INTRODUCTION

On December 19, 1991, the Federal Communications Commission

("Commission") released a Memorandum Opinion and Order in the above-captioned

proceeding,[1] wherein it established certain ongoing reporting requirements in order

"to enable the Commission to monitor the BOCs' [Bell Operating Companies]

progress in providing ONA [Open Network Architecture] capabilities to ESPs

[Enhanced Service Providers]."[2] In compliance with that Order,[3] U S WEST

Communications, Inc. ("U S WEST"), files the following with the Commission:

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[1] In the Matter of Filing and Review of Open Network Architecture Plans,
Memorandum Opinion and Order, 6 FCC Rcd. 7646 (1991) ("Monitoring Order" or
"Order").

[2] Id. at 7675 ¶ 64.

[3] See id. at 7663 ¶ 35 n.56, 7664 ¶ 38 n.63. See also id. at 7677-79, Appendix B,
summarizing the filing requirements.

1. A Nationwide Tariff Matrix (Attachment 1).

2. BOC ONA Special Report #5 Update (which contains updates of the Cross Reference Guide, Appendices A & B) (Attachment 2).

3. Hard copy portions of the ONA Services User Guide (Attachments 3 and 4).[4]

4. Diskettes of the ONA Services User Guide.[5]

The above-referenced items 1-3 are being filed only with the Commission.

The information contained in these submissions is available to interested persons

by contacting U S WEST InterConnect Services at 1-800-544-7126.

II. FILINGS REQUIRED BY SUMMARY ORDERING PARAGRAPH

At the conclusion of the Commission's Order, it provided a summary of future

filing requirements for the BOCs.[6] U S WEST has chosen herein to utilize the

Commission's basic "summary" as the outline by which we will make our responses.

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[4] Attachment 3 is the "Service Descriptions Section" of the ONA Services User Guide; Attachment 4 is the "Tariff Reference Section" of the same document.

[5] These diskettes are being provided directly to the Policy Division of the Commission and include the following material from the ONA Services User Guide: Service Descriptions Section (one diskette), Special Report #5 (one diskette), Tariff Reference Section (one diskette), and Wire Center Deployment (two diskettes).

[6] In response to the Commission's Further Notice of Proposed Rulemaking seeking comments on the elimination of some or all ONA reporting requirements, U S WEST proposed that the semi-annual reports and the Annual Report be consolidated into a new Annual ONA Report. The new Annual ONA Report would encompass all of the existing requirements of the semi-annual reports and streamlined information contained in its current ONA Annual Report. U S WEST Comments filed Mar. 27, 1998. In the Matter of Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services, 1998 Biennial Regulatory Review -- Review of Computer III and ONA Safeguards and Requirements, CC Docket Nos. 95-20 and 98-10, Further Notice of Proposed Rulemaking, FCC 98-8, rel. Jan. 30, 1998 ¶¶ 101-2.

This methodology was chosen for the Commission's ease of reference in assessing U S WEST's compliance.[7]

Requirement:

1.   "Work through the IILC [Information Industry Liaison Committee] to develop one consolidated nationwide matrix of BOC ONA services and state and federal ONA tariffs, and file the matrix with the Commission."[8]

Response:

U S WEST worked through the former IILC and with the other BOCs to develop a combined nationwide tariff reference matrix.[9] This document is included herewith as Attachment 1.

The nationwide matrix includes the generic name of the ONA service, which operating company offers the service in a particular jurisdiction, and whether the service is a Basic Service Element, Basic Serving Arrangement, or Complementary Network Service. The matrix also provides the name of the ONA service, as it is identified in a particular state or federal tariff, and a specific tariff reference.

Each BOC has reviewed the matrix to ensure the accuracy of the information contained therein pertaining to itself. The matrix identifies U S WEST's tariffs

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[7] U S WEST, in making this filing, does not concede that the Commission's jurisdiction to impose any ONA requirements on U S WEST is expanded by the filing itself. ONA remains a cooperative effort between the former BOCs and the Commission. U S WEST is not, through such cooperation, submitting to an expansion of the Commission's jurisdiction over U S WEST.

[8] Monitoring Order, 6 FCC Rcd. at 7678, Appendix B.

[9] The nationwide matrix was assembled by National Telecommunications Alliance, Inc. (NTA) at the request of the BOCs.

effective as of July 1, 1998, the effective date of the Tariff Reference Section of the

ONA Services User Guide.[10]

Requirement:

2.   "File computer diskettes and print outs of data regarding state and
        federal tariffs."[11]

Response:

This information -- in print-out form -- is contained in the Tariff Reference

Section of the ONA Services User Guide, which is included herein as Attachment 4.

The information as contained on computer diskettes is being provided to the Policy

Division of the Commission (see Response to Requirement 3, below), and is not

included herein as an attachment.

Requirement:

3.   "File a printed copy and computer diskette of the ONA Services User
        Guide."[12]

Response:

A printed copy of the July 31, 1998, ONA Services User Guide accompanies

this filing as Attachment 3 (the "Services Description Section") and Attachment 4

(the "Tariff Reference Section").[13] The ONA Services User Guide as it appears on

diskette (which includes wire center deployment information) is being provided to

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[10] The Tariff Reference Section of the ONA Services User Guide is discussed more
fully below and is provided as Attachment 4.

[11] Monitoring Order, 6 FCC Rcd. at 7678, Appendix B.

[12] Id.

[13] The Tariff Reference Section of the ONA Services User Guide provides the
information required by the Commission's Monitoring Order. Id. at 7664 n.63.

the Policy Division of the Commission coincident with this filing, as requested, and

is not herein included as an attachment.

Requirement:

4.   "File updated information contained in Appendix A of the January 31, 1991 Cross Reference Guide on ESP requests received and how they were addressed by the BOCs with details and matrices."[14]

Requirement:

5.   "File updated information contained in Appendix B of the January 31, 1991 Cross Reference Guide on BOC responses to the requests and matrix."[15]

Response:

Appendices A & B of the Cross Reference Guide, updated as of September 30,

1998, are identified as BOC ONA Special Report #5. A copy of this Special Report is

provided as Attachment 2.

Requirement:

6. "File updated information contained in Appendix C of the January 31, 1991 Cross Reference Guide on services offered by the BOC in response to the requests."[16]

Response:

This updated information is contained in the ONA Services User Guide,

"Service Descriptions Section," attached herein as Attachment 3.

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[14] Id. at 7678, Appendix B.

[15] Id.

[16] Id. at 7679, Appendix B.

III.   CONCLUSION
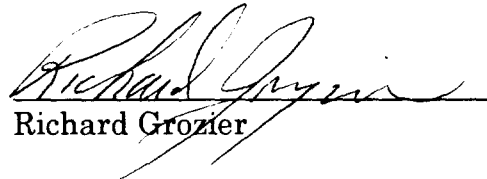
As set forth herein, U S WEST makes the appropriate filings as required by the Commission's Monitoring Order.

DATED: September 30, 1998

CERTIFICATE OF SERVICE

I, Richard Grozier, do hereby certify on this 30th day of September, 1998, that

I have caused a copy of the foregoing **SIX-MONTH REPORT OF U S WEST**

COMMUNICATIONS, INC., to be filed with the Office of the Secretary of the

FCC, with one copy* hand-delivered to the following:

Janice M. Myles
Federal Communications Commission
Room 544
1919 M Street, N.W.
Washington, DC 20554

Richard Grozier

*Diskettes included with hard-copy

Service Name (Generic) (some Region Specific)	Pg	Ameritech					Bell Atlantic							BellSouth									NYNEX						Pacific		SWBT					U S WEST													
		IL	IN	MI	OH	WI	DE	DC	MD	NJ	PA	VA	WV	AL	FL	GA	KY	LA	MS	NC	SC	TN	ME	MA	NH	NY	RI	VT	CA	NV	AR	KS	MO	OK	TX	AZ	CO	ID	IA	MN	MT	NE	NM	ND	OR	SD	UT	WA	WY
555 Access Service	R9																																				A					A		A					
AIN Alternate Routing	R10													D	D	D	D	D	D	D	D	D																											
AIN Single Number Access	R11													B	B	B	B	B	B	B	B	B																											
AIN Term Data Co/Cus Rt	R12													C	C	C	C	C			C	C																											
ATM Cell Relay Service	R4																																			AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
Abbreviated Call-Packet	R56																																			C	CC	C	C	C	C	C	C	C	C	C	C	C	C
Acc To Clr Ch Transmissn	157	BB	BB	BB	BB	BB	B	B	BB	B	BB	B	B	AA	AA	AA	AA	AA	AA	AA	AA	AA	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Access To OSS Info	158													BD	BD	BD	BD	BD	BD	BD	BD	BD																											
Access to Cust Prem Annc	R67																							B		B																							
Access to Ordr Entry Sys	R68													BD	BD	BD	BD	BD	BD	BD	BD	BD																											
Alternate Routing	44	AA	AA	AA	AA	AA	BB	B	BB	BB	BB	BB	B	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	AA	AA	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Answer Supv'n Line Side	46	BB	BB	BB	BB	BB	B	B	BB	B	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB				D			BB	B						BB	BB	BB	BB	BB	B	BB	BB	BB	BB	B	BB	BB	B
Auto Disaster Rec. DID	R13																																																
Automatic Callback	48	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Automatic Protect Swtchg	159	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	B	B	B	B	BB	BB		BB	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB		B	B	B	B
Automatic Recall	50	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Bridging	161	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Bridging - Line	R15																						BB	BB	BB	BB	BB	BB																					
C1 TypA - Ckt Sw Line	8	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C1 TypB - Ckt Sw Trunk	10	AA	AA	AA	AA	AA	AA	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C2 TypA - X.25 Pkt Sw	13	AA	AA	AA	AA	AA	A	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A		AA	AA	AA	AA	AA	A	A	A	A	A	A	A	A	A	A	A	A	A	A
C2 TypB - X.75 Pkt Sw	16	AA	AA	AA	AA	AA	A	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA		AA	AA	AA	AA	AA	A	A	A	A	A	A	A	A	A	A	A	A	A	A
C3 TypA - Ded Metallic	19						AA	AA	AA	AA	AA	AA	AA										AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	AA	A	AA	A	A	A	AA	A	AA
C3 TypB - Ded Telegraph	21						AA	AA	AA	AA	AA	AA	AA										AA	AA	AA	AA	AA	AA	AA	AA						AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C3 TypC - Ded Voice Grd	23	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C3 TypD - Ded Prgm Audio	25	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C3 TypE - Ded Video	27	AA	AA	AA	AA	A	A	A	AA	AA	A	AA	A	AA	A	AA	AA	AA	AA	AA	A	A	A	A	A	AA	A	A	AA	AA	AA	AA	AA	AA	AA	A	A	A	AA	AA	A	A	A	A	A	A	A	A	A
C3 TypF - Ded < 64kbps	29	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C3 TypG - Ded 1.544Mbps	31	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C3 TypH - Ded >1.544Mbps	33	AA	AA	AA	AA	AA	A	A	A	A	A	A	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	A	A	AA	AA	A	A	A	A	A	AA	AA	AA	AA	AA	AA	AA	AA	A	A	AA	A	AA	A
C3 TypI - Ded Alrt Tmsp	35							A		A	A					A							AA	AA		AA	AA																						
C3 TypJ - Ded Derived Ch	37													AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA			AA					AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C3 TypK - Ded 64 kbps	39	AA	AA	AA	AA	AA	A	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	BB	BB	BB	BB	BB	BB								AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
C4 - Ded Ntwk Accss Link	41	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA							AA	AA	AA	AA	AA	AA	AA	A	A	A	A	A	A	A	A	A	A	A	A	A	A
CF Mult Sim Call Intersw	69	C	C		C	C								C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C	C	C	C	C	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
CF Var Act w/o Crtsy Cal	72	C	C		C	C								C	C	C	C	C	C	C	C	C		C		C			C							C	C			C	C			C				C	
CF Var Remote Act/Cntrl	73	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C		C			C		C	C	C	C	C	C	C	C	C	C	C	C		C	C	C	C	C	C
CF Variable	70	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C	C	C	C	C	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
CF With Variable Rings	75	C	C		C	C																		C		C																							
CFBL Interswitch	57	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
CFBL Intraswitch	55	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
CFBL/DA Cust Act/Deact	59	C	C		C	C								C	C	C	C	C	C	C	C	C		C		C			C							C	C	C	C	C	C	C	C	C	C	C	C	C	C
CFBL/DA Cust Chg Fwd No.	61	C	C		C	C																		C					C							C	C	C	C	C	C	C	C	C	C	C	C	C	C
CFDA After CW	63	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C				C	C	C	C	C	C		C	C	C	C	C	C	C
CFDA Interswitch	67	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
CFDA Intraswitch	65	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
CFDA To DID Intraswitch	R20													C	C	C	C	C	C	C	C	C																											
9/30/98 Update [Page 1]																																																	

Service Name (Generic) (some Region Specific)	Pg	Ameritech					Bell Atlantic							BellSouth									NYNEX						Pacific		SWBT					U S WEST													
		IL	IN	MI	OH	WI	DE	DC	MD	NJ	PA	VA	WV	AL	FL	GA	KY	LA	MS	NC	SC	TN	ME	MA	NH	NY	RI	VT	CA	NV	AR	KS	MO	OK	TX	AZ	CO	ID	IA	MN	MT	NE	NM	ND	OR	SD	UT	WA	WY
Call Denial - Line/Hunt	R16																												BB																				
Call Det Rcdg-NXX Screen	R17																																				B			B		B	B					B	B
Call Det Recd'g Rpts Pkt	144						B	B	BB	BB	BB	BB	BB										BD	BD	BD	BD	BD	BD			BB	BB	BB	BB	BB														
Call Detail Recrd'g Rpts	53													B	B	B	B	B	B	B	B	B	D	D	D	D	D	D							B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Call Forwarding Originating	R18	C																																															
Call Redirect Acceptance	R85	BB	BB	BB	BB	BB																																											
Call Redirection Packet	145	BB	BB	BB	BB	BB	B	B	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB		BB	BB	BB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Call Transfer On DID	R21						B	B	B	B	B	B	B	B	B		B			B	B	B														B	B	B	B	B	B	B	B		B	B	B	B	B
Call Waiting	R22	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C																			
Call Waiting Cancel	76	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Clld DN Deliv via 900NXX	81	BB	BB	BB	BB	BB	B	B	B	BB	BB	B	B										BB	BB	B	BB	BB	B			AA	AA	AA	AA	A														
Clld DN Deliv via DID	78						BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BB	BB						B	B	BB	B	B	B	B	B	B	B	BB	B	B	BB
Clld/Cllg Numbr Info-ANI	R25													B	B	B	B	B			B	B																											
Cllg Bllg Num Deliv FG B	82						BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB							BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Cllg Bllg Num Deliv FG D	84	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Cllg DN Deliv via BCLID	177													BB	BB	BB	BB	BB	BB	B	BB	BB														BB	BB	BB	BB	BB	BB	BB	BB	B	BB	B	BB	BB	B
Cllg DN Deliv via ICLID	87	C			C	C	B	B	B	B		B	B	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		BB						BB	BB	BB	BB	B	BB	BB	BB	BB	BB	B	BB	BB	BB
Closed User Groups Pkt	146	BD	BD	BD	BD	BD	B	B	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB		BB	BB	BB	BB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Coin Ph-Post Dial DTMF	91						C	C	C	C	C	C	C	A	A	A	A	A	A	A	A	A	C	C	C	C	C	C			C	C	C	C	C	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Computr Assist Call Xfer	R84	BB	BB	BB	BB	BB																																											
Computr Assist Dialing	R83	BB	BB	BB	BB	BB																																											
Conditioning	163	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Coord Voice and Data	R82	BB	BB	BB	BB	BB																																											
Cust Originated Trace	92	C	C		C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Custom Service Areas	R27													B	B	B	B	B			B	B																											
Cut Off On Disconnect	94						A	A	A	A	A	A	A	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA																					A
Cxr Select On Rvrs Charg	89	AA	AA	AA	AA	AA	BB	B	BB	BB	BB	BB	BB	AA	AA	AA	AA	AA	AA	AA	AA	AA	BB	BB	BB	BB	BB	BB	AA	AA						A	A	A	A	A	A	A	A	A	A	A	A	A	A
DID Load Across WC	R32																									D																							
DID Trunk Queuing	95						B	B	B	B	B	B	B																BB							B	B	BB	B	B	B	B	B	B	B	BB	B	BB	B
DNAL Alarm Service	41	AA	AA	AA	AA	AA																																											
DNAL Amtch Reconfig Svcs	41	AA	AA	AA	AA	AA																																											
DNAL Amtch Sw-Cmputr Apl	41	AA	AA	AA	AA	AA																																											
DNAL Ckt Sw Fac Cntrl	41	AA	AA	AA	AA	AA																																											
DNAL SMDI	41	AA	AA	AA	AA	AA																																											
DNAL SMDI-E	41	AA	AA	AA	AA	AA																																											
DNAL STP Access	41	AA	AA	AA	AA	AA																																											
DS0-B Subrate Multiplxr	R69													BD	BD	BD	BD	BD	BD	BD	BD																												
Data Over Voice (DOV)	164													C	C	C	C	C	C	C	C	C							C		C	C	C	C	C	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
Default Window Size-Pkt	R57																						BD	BD	BD	BD	BD	BD								B	B	B	B	B	B	B	B	B	B	B	B	B	B
Derived Ch (Monitoring)	166	CC	CC	CC	CC	CC	C		C		C					C							AA	AA		AA	AA		C	C						C											C	C	
Dial Call Waiting	R30																						BD	BD	BD	BD	BD	BD								B	B	B	B	B	B	B	B	B	B	B	B	B	
Dialed Num ID/INWATS-DID	R31													BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB																					
Dir Call Pickup w/Barge	R33																																			B	B	B	B	B	B	B	B	B	B	B	B	B	B
Dir Call Pickup w/oBarge	R34																																			B	B	B	B	B	B	B	B	B	B	B	B	B	B
Direct Call Packet	148	C	C		C	C	C	C	CC	CC	CC	CC	CC	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	CC		CC	CC	CC	CC	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C

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Service Name (Generic) (some Region Specific)	Pg	Ameritech					Bell Atlantic							BellSouth									NYNEX						Pacific		SWBT					US WEST													
	Pg	IL	IN	MI	OH	WI	DE	DC	MD	NJ	PA	VA	WV	AL	FL	GA	KY	LA	MS	NC	SC	TN	ME	MA	NH	NY	RI	VT	CA	NV	AR	KS	MO	OK	TX	AZ	CO	ID	IA	MN	MT	NE	NM	ND	OR	SD	UT	WA	WY
Dist Ring Term Screen	99	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C			C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Distinctive Alert	R35																																			B	B	B	B	B	B	B	B	B	B	B	B	B	B
Distinctive Ringing	96	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C							C	C	C	C	C	C	C															
Extended Superframe Cond	168	BB	BB	BB	BB	BB	A	A	AA	A	A	A	A	AA	AA	AA	AA	AA	AA	AA	AA	AA									BB	BB	BB	BB	BB														
Fast Select Accept Pkt	149	BB	BB	BB	BB	BB	B	B	B	B	B	B	B	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB		BB	BB	BB	BB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Fast Select Request Pkt	150	C	C		C	C								BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB		BB	BB	BB	BB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Faster Signaling On DID	101						BB	B	B	B		B	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD								AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
Flexible ANI	102	BB	BB	BB	BB	BB	B	B	B	B	B	B	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	B	B	B	B	B			BB	BB	BB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Flow Contr Param Neg-Pkt	R58																																			B	B	B	B	B	B	B	B	B	B	B	B	B	B
Frame Relay Service	R5													BB	BB	BB	BB	BB		BB	BB	BB	AA	AA	AA	AA	AA	AA								AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
High Cap Dig Handoff Svc	R70							B	B	B	B	B																																					
Hot Line	103													C	C	C	C	C	C	C		C	BD	BD	BD	BD	BD	BD	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Hunt Groups Packet	151	BB	BB	BB	BB	BB	B	B	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB		BB	BB	BB	BB	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
Inband Signaling	R71						BB	BB	BB	BB	BB	BB	BB																																				
Incoming Cls Barred-Pkt	R59																						BD	BD	BD	BD	BD	BD								B	B	B	B	B	B	B	B	B	B	B	B	B	B
Initial Address Message	R80	BB	BB	BB	BB	BB																																											
Logical Chan Layout-Pkt	R61																																			B	B	B	B	B	B	B	B	B	B	B	B	B	B
Logical Channels-Pkt	R60																																			B	B	B	B	B	B	B	B	B	B	B	B	B	B
MLHG Access to Each Port	111	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MLHG CO Announcements	109	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB	BB	BD	BD	BD	BD	BD	BD	BB		BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MLHG Overflow	113	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	BB							BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MLHG UCD Line Hunting	115	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	B	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MLHG UCD With Queuing	117	BB	BB	BB	BB	BB								BB	BB	BB	BB	BB	BB	B	BB	BB	BD	BD	BD	BD	BD	BD	BB		BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MWI - Packet Access	153																														BB	BB	BB	BB	BB														
MWI ATR Audible Msg Wtg	104	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
MWI ATR Visual Msg Wtg	106	C	C		C	C								C	C	C	C	C	C	C	C								C	C						CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC
MWI Act (Audible) Expand	187	BB	BB	BB	BB	BB																														BB	BB	BB	B	BB	B		BB	BB	B	BB	B	BB	B
MWI Act (Visual) Expand	190	BB	BB	BB	BB	BB																														B	B	B	B	B	B		B	B	B	B	B	B	B
MWI Activation (Audible)	185	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	B	B	B	B	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MWI Activation (Visual)	189	BB	BB	BB	BB	BB								B	B	B	B	B	B	B	B	B							BB	B						BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MWI Audible/Visual	104	C	C		C	C																														C	C	C	C	C	C	C	C	C	C	C	C	C	C
Make Busy Key	179	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
MegaBit Service	R6																																			AA	AA	AA	AA	AA	AA	AA	A	AA	AA	AA	AA	AA	AA
Menu Acs Trans - Gateway	152																																															B		
Menu Server-Pkt	R62																														DD	DD	DD	DD	DD														
Message Desk (SMDI)	181	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	B	B	B	B	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Monthly Call Detail Rec	R38													B	B	B	B	B			B	B																											
Mplx-T1-1.544Mbps-Line	R39																																			BB	BB	BB		BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Mplx-T1-1.544Mbps-Trunk	R40																						B	BD	B	BD	B	B																					
Mssg Desk Expand (SMDIE)	183	BB	BB	BB	BB	BB								BB	BB	BB	BB	BB	BB	BB	BB	BB													B	BB	BB	BB		BB	B	BB	BB	B	BB	B	B	BB	B
Multiline Hunt Group	107	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Multiplexing-Digital	R73	BB	BB	BB	BB	BB	B	B	B	B	B	B	B	BD	BD	BD	BD	BD	BD	BD	BD	BD	B	BB	B	BB	B	B			BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Name of Calling Party	119		C				C		C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C																						
Network Reconfiguration	192	BB	BB	BB	BB	BB	B	B	B	B	B	B	B	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	BB		BB	BB	BB	BB	BB	BB	B		BB	BB	B		BB		BB	BB	B		B
Order Entry Service	R79																																							B		B							
Outgoing Cls Barred-Pkt	R64																						BD	BD	BD	BD	BD	BD								B	B	B	B	B	B	B	B	B	B	B	B	B	B
Perm Virtual Ckt-Pkt	R65																						BD	BD	BD	BD	BD	BD								B	B	B	B	B	B	B	B	B	B	B	B	B	B
9/30/98 Update [Page 3]																																																	

Service Name (Generic) (some Region Specific)	Pg	Ameritech					Bell Atlantic							BellSouth									NYNEX						Pacific		SWBT					U S WEST													
		IL	IN	MI	OH	WI	DE	DC	MD	NJ	PA	VA	WV	AL	FL	GA	KY	LA	MS	NC	SC	TN	ME	MA	NH	NY	RI	VT	CA	NV	AR	KS	MO	OK	TX	AZ	CO	ID	IA	MN	MT	NE	NM	ND	OR	SD	UT	WA	WY
Preselect for Data Svcs	154						B	B	B	B	B	B	B	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB		CC	CC	CC	CC	C														
Priority Service Install	R42													BD	BD	BD	BD	BD	BD	BD	BD	BD																											
Remote Call Forwarding	R43						C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C								B	B	B	B	B	B	B	B	B	B	B	B	B	B
Rev Bllg On Ckt Acc	121													B	B	B	B	B			B	B																											
Rev Chg Req Optn-Pkt	R66																						BD	BD	BD	BD	BD	BD								B	B	B	B	B	B	B	B	B	B	B	B	B	B
Reverse Chg Accept Pkt	155	BB	BB	BB	BB	BB	B	B	BB	BB	BB	BB	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB							B	B	B	B	B	B	B	B	B	B	B	B	B	BB
Route Diversity	169	BB	BB	BB	BB	BB								BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB			BB	BB	BB	BB	BB														
Secondary Ch Capability	170	BB	BB	BB	BB	BB	BB	B	B	BB	BB	B	B	BD	BD	BD	BD	BD	BD	BD	BD	BD	BB	BB	BB	BB	BB	BB	BB		BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Selective Call Forward'g	122						C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C							C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Selective Call Rejection	125	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C							C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Shared Speed Calling	128																												C							C	C	C	C	C	C	C	C	C	C	C	C	C	C
Single Num Acc-Mult Locn	130													C	C	C	C	C	C	C	C	C																											
Speed Calling	132	C	C		C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C		C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
Surrogate Client Number	R47													BB	BB	BB	BB	BB	BB	B	BB	BB																											
Svc Code Denial Ln/Hunt	R45																												BB																				
Switched 56 Kilobit Svc	R48						AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	A	AA	AA																			
Tandem Routing	134	BB	BB	BB	BB	BB		B		B	B	B	B	BB	BB	BB	BB	BB	BB	B	BB	BB	AA	AA	AA	AA	AA	AA	AA	AA																		
Third Numb Bill Inhibitd	R50														D		D	D	D												C	C	C	C	C														
Three Way Call Transfer	136	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	B	BB	BD	BD	BD	BD	BD	BD	BD	BD	BD	B	B	B	B	B	B	BB	B						BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Three Way Calling	R51						BB	BB	BB	BB	BB	BB	BB	C	C	C	C	C	C	C	C	C	BB	BB	BB	BB	BB	BB								BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Traffic Data Reports	R53													B	B	B	B	B	B	B	B	B	BB	BB	BB	BB	BB	BB								BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
Trans Imprv-Ckt Sw Svcs	R54																												B	B						B	B				B	B	B	B	B	B	B		
Trunk Side Access Facil	R7													A	A	A	A	A			A	A																											
Unif 7D Acc Num Overlay	140													BB	BB	BB	BB	BB	BB	B	BB	BB	BB	BB	BB	BB	BB	BB																					
Unif 7D Acc Num RCF	138						B			B																																							
Unif Acc Numb-Bus Lines	R55													B	B	B	B	B			B	B																											
User Initd Diagnostics	R76													BD	BD	BD	BD	BD	BD	BD	BD	BD																											
Ver Intgrty Subscr Lines	173	BD	BD	BD	BD	BD																	AA	AA		AA	AA		BB	BB						C					B						B			B
Video DT Messaging Port	R87									B		B																																					
Video Dialtone Access Lk	R8									A		A																																					
Video Dialtone Bdcst Svc	R86									B		B																																					
Video Dialtone Narrowcas	R88									B		B																																					
Warm Line	141	C	C		C	C								C	C	C	C	C	C		C	C	BD	BD	BD	BD	BD	BD	C	C	C	C	C	C	C	C	C	C	C	C	C		C	C	C		C	C	C
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Page numbers are based on 7/31/98 release of the ONA Services User Guide
Page numbers preceded by R are in Appendix 1 of the ONA Services User Guide, which contains Region Specific services.

Abbreviations: A=BSA
                  B=BSE
                  C=CNS
                  D=BSE/CNS

Under each state abbreviation, the left column contains FCC tariff information and the right column contains state tariff information.

ABBREVIATIONS

Generic Name of Service Abbreviated Name	Generic Name of Service Full Name
555 Access Service	555 Access Service
AIN Alternate Routing	Advanced Intelligent Network Alternate Routing
AIN Single Number Access	AIN Single Number Access
AIN Term Data Co/Cus Rt	AIN Terminating Data Collection/Customized Routing
ATM Cell Relay Service	ATM Cell Relay Service
Abbreviated Call-Packet	Abbreviated Call - Packet
Acc To Clr Ch Transmissn	Access To Clear Channel Transmission
Access To OSS Info	Access To Operations Support Systems Information
Access to Cust Prem Annc	Access To Customer Premises Announcement
Access to Ordr Entry Sys	Access To Order Entry System
Alternate Routing	Alternate Routing
Answer Supv'n Line Side	Answer Supervision With A Line Side Interface
Auto Disaster Rec. DID	Automatic Disaster Recovery of DID
Automatic Callback	Automatic Callback
Automatic Protect Swtchg	Automatic Protection Switching
Automatic Recall	Automatic Recall
Bridging	Bridging
Bridging - Line	Bridging - Line
C1 TypA - Ckt Sw Line	Category 1, Type A - Circuit Switched Line BSA
C1 TypB - Ckt Sw Trunk	Category 1, Type B - Circuit Switched Trunk BSA
C2 TypA - X.25 Pkt Sw	Category 2, Type A - X.25 Packet Switched BSA
C2 TypB - X.75 Pkt Sw	Category 2, Type B - X.75 Packet Switched BSA
C3 TypA - Ded Metallic	Category 3, Type A - Dedicated Metallic BSA
C3 TypB - Ded Telegraph	Category 3, Type B - Dedicated Telegraph BSA
C3 TypC - Ded Voice Grd	Category 3, Type C - Dedicated Voice Grade BSA
C3 TypD - Ded Prgm Audio	Category 3, Type D - Dedicated Program Audio BSA
C3 TypE - Ded Video	Category 3, Type E - Dedicated Video BSA
C3 TypF - Ded < 64kbps	Category 3, Type F - Dedicated Digital (<64kbps)BSA
C3 TypG - Ded 1.544Mbps	Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA
C3 TypH - Ded >1.544Mbps	Category 3, Type H - Dedicated High Capacity Digital (>1.544 Mbps) BSA
C3 TypI - Ded Alrt Trnsp	Category 3, Type I - Dedicated Alert Transport BSA
C3 TypJ - Ded Derived Ch	Category 3, Type J - Dedicated Derived Channel BSA
C3 TypK - Ded 64 kbps	Category 3, Type K - Dedicated Digital (64 kbps) BSA
C4 - Ded Ntwk Accss Link	Category 4 - Dedicated Network Access Link BSA
CF Mult Sim Call Intersw	Call Forwarding - Multiple Simultaneous Calls Interswitch
CF Var Act w/o Crtsy Cal	Call Forwarding - Variable - Activation Without Courtesy Call
CF Var Remote Act/Cntrol	Call Forwarding - Variable-Remote Activation/Control
CF Variable	Call Forwarding - Variable
CF With Variable Rings	Call Forwarding With Variable Rings
CFBL Interswitch	Call Forwarding - Busy Line Interswitch
CFBL Intraswitch	Call Forwarding - Busy Line Intraswitch
CFBL/DA Cust Act/Deact	Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation
CFBL/DA Cust Chg Fwd No.	Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number
CFDA After CW	Call Forwarding Don't Answer After Call Waiting
CFDA Interswitch	Call Forwarding - Don't Answer Interswitch

ABBREVIATIONS

Generic Name of Service Abbreviated Name	Generic Name of Service Full Name
CFDA Intraswitch	Call Forwarding - Don't Answer Intraswitch
CFDA To DID Intraswitch	Call Forwarding Don't Answer To DID Intraswitch
Call Denial - Line/Hunt	Call Denial On Line Or Hunt Group
Call Det Rcdg-NXX Screen	Call Detail Recording Reports - via NXX Screening
Call Det Recd'g Rpts Pkt	Call Detail Recording Reports (Packet)
Call Detail Recrd'g Rpts	Call Detail Recording Reports
Call Forwarding Options	Call Forwarding Options
Call Redirect Acceptance	Call Redirection Acceptance
Call Redirection Packet	Call Redirection - Packet
Call Transfer On DID	Call Transfer On DID
Call Waiting	Call Waiting
Call Waiting Cancel	Call Waiting - Cancel
Clld DN Deliv via 900NXX	Called Directory Number Delivery via 900NXX
Clld DN Deliv via DID	Called Directory Number Delivery via DID
Clld/Cllg Numbr Info-ANI	Called/Calling Number Information - ANI
Cllg Bllg Num Deliv FG B	Calling Billing Number Delivery - FG B Protocol
Cllg Bllg Num Deliv FG D	Calling Billing Number Delivery - FG D Protocol
Cllg DN Deliv via BCLID	Calling Directory Number Delivery - via BCLID
Cllg DN Deliv via ICLID	Calling Directory Number Delivery - via ICLID
Closed User Groups Pkt	Closed User Groups - Packet
Coin Ph-Post Dial DTMF	Coin Phone With Post Dialing Tone Capability
Computr Assist Call Xfer	Computer Assisted Call Transfer Acceptance
Computr Assist Dialing	Computer Assisted Dialing Acceptance
Conditioning	Conditioning
Coord Voice and Data	Coordinated Voice and Data Acceptance
Cust Originated Trace	Customer Originated Trace
Custom Service Areas	Custom Service Areas
Cut Off On Disconnect	Cut Off On Disconnect
Cxr Select On Rvrs Charg	Carrier Selection On Reverse Charge
DID Load Across WC	DID Load Across Wire Centers
DID Trunk Queuing	DID Trunk Queuing
DNAL Alarm Service	Ameritech - DNAL - Type F - Alarm Service
DNAL Amtch Reconfig Svcs	Ameritech - DNAL - Type E - Ameritech Reconfiguration Service
DNAL Amtch Sw-Cmputr Apl	Ameritech - DNAL - Type G - Ameritech Switch to Computer Applications (ASCAI)
DNAL Ckt Sw Fac Cntrl	Ameritech - DNAL - Type B - Circuit Switch Facility Control
DNAL SMDI	Ameritech - DNAL - Type C - Simplified Message Desk Interface (SMDI)
DNAL SMDI-E	Ameritech - DNAL - Type D - Simplified Message Desk Interface-Expanded (SMDI-E)
DNAL STP Access	Ameritech - DNAL - Type A - Signal Transfer Point Access (STP)
DS0-B Subrate Multiplxr	DS0-B Subrate Multiplexing Service
Data Over Voice (DOV)	Data Over Voice (DOV) Service
Default Window Size-Pkt	Default Window Size - Packet
Derived Ch (Monitoring)	Derived Channels (Monitoring)
Dial Call Waiting	Dial Call Waiting
Dialed Num ID/INWATS-DID	Dialed Number Identification via INWATS to DID

2

ABBREVIATIONS

Generic Name of Service Abbreviated Name	Generic Name of Service Full Name
Dir Call Pickup w/Barge	Directed Call Pickup With Barge-In
Dir Call Pickup w/oBarge	Directed Call Pickup Without Barge-In
Direct Call Packet	Direct Call - Packet
Dist Ring Term Screen	Distinctive Ringing - Terminating Screening
Distinctive Alert	Distinctive Alert
Distinctive Ringing	Distinctive Ringing
Extended Superframe Cond	Extended Superframe Conditioning
Fast Select Accept Pkt	Fast Select Acceptance - Packet
Fast Select Request Pkt	Fast Select Request - Packet
Faster Signaling On DID	Faster Signaling On DID
Flexible ANI	Flexible ANI Information Digits
Flow Contr Param Neg-Pkt	Flow Control Parameter Negotiation - Packet
Frame Relay Service	Frame Relay Service
High Cap Dig Handoff Svc	High Capacity Digital Hand-Off Service
Hot Line	Hot Line
Hunt Groups Packet	Hunt Groups - Packet
Inband Signaling	Inband Signaling
Incoming Cls Barred-Pkt	Incoming Calls Barred - Packet
Initial Address Message	Initial Address Message
Logical Chan Layout-Pkt	Logical Channel Layout - Packet
Logical Channels-Pkt	Logical Channels - Packet
MLHG Access to Each Port	Multiline Hunt Group - Individual Access To Each Port In Hunt Group
MLHG CO Announcements	Multiline Hunt Group - C.O. Announcements
MLHG Overflow	Multiline Hunt Group - Overflow
MLHG UCD Line Hunting	Multiline Hunt Group - Uniform Call Distribution Line Hunting
MLHG UCD With Queuing	Multiline Hunt Group - UCD With Queuing
MWI - Packet Access	Message Waiting Indicator - Packet Access
MWI ATR Audible Msg Wtg	Message Waiting Indicator (MWI) - Ability To Receive Audible Message Waiting
MWI ATR Visual Msg Wtg	Message Waiting Indicator (MWI) - Ability To Receive Visual Message Waiting
MWI Act (Audible) Expand	Message Waiting Indicator Activation(Audible) - Expanded
MWI Act (Visual) Expand	Message Waiting Indicator Activation(Visual) - Expanded
MWI Activation (Audible)	Message Waiting Indicator - Activation (Audible)
MWI Activation (Visual)	Message Waiting Indicator - Activation (Visual)
MWI Audible/Visual	Message Waiting Indicator - Audible/Visual
Make Busy Key	Make Busy Key
MegaBit Service	MegaBit Service
Menu Acs Trans - Gateway	Menu Access Translator - Gateway
Menu Server-Pkt	Menu Server - Packet
Message Desk (SMDI)	Message Desk (SMDI)
Monthly Call Detail Rec	Monthly Call Detail Recording
Mplx-T1-1.544Mbps-Line	Multiplexing - T1 Transport - 1.544 Mbps-Line Side
Mplx-T1-1.544Mbps-Trunk	Multiplexing - T1 Transport - 1.544 Mbps-Trunk Side
Mssg Desk Expand (SMDIE)	Message Desk (SMDI) - Expanded
Mult Ntwk Addr/Port-Pkt	Multiple Network Address/Port - Packet
Multiline Hunt Group	Multiline Hunt Group

ABBREVIATIONS

Generic Name of Service Abbreviated Name	Generic Name of Service Full Name
Multiplexing-Digital	Multiplexing - Digital
Name of Calling Party	Delivery of Calling Party Name
Network Reconfiguration	Network Reconfiguration
Order Entry Service	Order Entry Service
Outgoing Cls Barred-Pkt	Outgoing Calls Barred - Packet
Perm Virtual Ckt-Pkt	Permanent Virtual Circuit - Packet
Preselect for Data Svcs	Preselection for Data Services
Priority Service Install	Priority Installation Service
Remote Call Forwarding	Remote Call Forwarding
Rev Bllg On Ckt Acc	Reverse Billing On Circuit Switched Access
Rev Chg Req Optn-Pkt	Reverse Charge Request Option (Packet)
Reverse Chg Accept Pkt	Reverse Change Acceptance - Packet
Route Diversity	Route Diversity
Secondary Ch Capability	Secondary Channel Capability
Selective Call Forward'g	Selective Call Forwarding
Selective Call Rejection	Selective Call Rejection
Shared Speed Calling	Shared Speed Calling
Single Num Acc-Mult Locn	Single Number Access for Multiple Locations
Speed Calling	Speed Calling
Surrogate Client Number	Surrogate Client Number
Svc Code Denial Ln/Hunt	Service Code Denial On Line Or Hunt Group
Switched 56 Kilobit Svc	Switched 56 Kilobit Service
Tandem Routing	Tandem Routing
Third Numb Bill Inhibitd	Third Number Billing Inhibited
Three Way Call Transfer	Three Way Call Transfer
Three Way Calling	Three Way Calling
Traffic Data Reports	Traffic Data Reports
Trans Imprv-Ckt Sw Svcs	Transmission Improvement for Circuit Switched Services
Trunk Side Access Facil	Trunk Side Access Facility
Unif 7D Acc Num Overlay	Uniform 7 Digit Access Number via Overlay Networking
Unif 7D Acc Num RCF	Uniform 7 Digit Access Number - Remote Call Forwarding
Unif Acc Numb-Bus Lines	Uniform Access Numbers for Business Lines
User Initd Diagnostics	User Initiated Diagnostics
Ver Intgrty Subscr Lines	Verify Integrity of Subscriber Lines
Video DT Messaging Port	Video Dialtone Messaging Port
Video Dialtone Access Lk	Video Dialtone Access Link
Video Dialtone Bdcst Svc	Video Dialtone Broadcast Service
Video Dialtone Narrowcas	Video Dialtone Narrowcast Service
Warm Line	Warm Line
(9/30/98)	

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BELL OPERATING COMPANIES

ONA Special Report #5 Update

Appendix A & Appendix B

SEPTEMBER 30, 1998

1. Appendix A: Relationship Between ESP Requests for Network Capabilities and ONA Services

The FCC, in its December 22, 1989 Memorandum, Opinion and Order, recognized the 118 requests for network capabilities included in BOC Special Report Number 1 as the nationally received requests. Not all of these requests are for particular services. For example, some are for attributes that a service should contain; some are for a service to operate in a particular manner. As a result, some ONA services offered meet a number of network capability requests, while some requests are met by a number of ONA services. There is not a one-for-one relationship between network capability requests and ONA services. In addition, some ONA services may be offered by some regional companies as both a BSE and a CNS, depending on the line that the service is applied to.

The following appendix shows the relationship between each of the requested network capabilities, other requested network capabilities and ONA services. The ONA services listed use the Uniform Names developed by the regional companies and contributed to the IILC Issue 006 ONA Services User Guide Task Group.

Following this Appendix A is a summary table (Appendix B) arranged to be similar to Appendix E of the FCC's December 22, 1988 Memorandum Opinion and Order.

1. Call Forwarding Busy Line/Don't Answer

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Call Forwarding - Busy Line Intraswitch
- Call Forwarding - Busy Line Interswitch
- Call Forwarding - Don't Answer Intraswitch
- Call Forwarding - Don't Answer Interswitch

2. Activation Of Call Forwarding Variable Without Call Completion

This is a request for an attribute of service. It is being met by some regional companies by offering the following ONA service:

- Call Forwarding - Variable - Activation Without Courtesy Call

3. Call Forward Don't Answer Interoffice

This request relates to request number 1. It is being met by offering the following ONA service:

- Call Forwarding - Don't Answer Interswitch

4. Multiple Calls Forwarded To DID Interoffice

This is a request for a particular application of a service. It is being met by some regional companies by offering the following service:

- Call Forwarding - Multiple Simultaneous Calls Interswitch

5. Call Forwarding With Status Information To Answering Bureau

This request is for a particular application of a service. It is being met by some regional companies by offering the following service:

- Message Desk (SMDI)
- Message Desk (SMDI) - Expanded

6. Activation of Call Forwarding Variable With Call Completion

This request is for a service. It is being met by offering the following service:

- Call Forwarding - Variable

7. Call Forwarding With Call Screening.

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Selective Call Forwarding

8. Call Forwarding With Call Waiting

This is a request for two services to interact in a particular manner. It is met by some regional companies by offering the following ONA service:

- Call Forwarding Don't Answer After Call Waiting (CFDA After CW)

9. Call Forwarding With Called and Calling Number

This is a request for a particular application of a service. It is related to request number 5. It is being met by some regional companies by offering the following ONA services:

- Calling Directory Number Delivery - via BCLID
- Message Desk (SMDI)
- Message Desk (SMDI) - Expanded

10. Call Forward Don't Answer With Variable Ring Counts

This is a request for a service to operate in a particular manner. It is related to request number 1. It is being met by offering the following ONA services:

- Call Forwarding - Don't Answer Interswitch
- Call Forwarding - Don't Answer Intraswitch
- Customer Changeable Number of Rings

11. Customer Control of CFBL/CFDA

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation
- Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number

12. Monitor & Barge In

This is a request for a service that requires development.

13. SMDI

This is a request for a particular interface. It is related to requests number 5 and 9. It is being met by some regional companies by offering the following ONA service:

- Message Desk (SMDI)
- Message Desk (SMDI) - Expanded

14. SMDI With Automatic Ringback

This is a request for a service to operate in a particular manner. Based on the findings in IILC Issue #030 (Message Waiting Indication: Ringback After Busy Transfer), it is being met by some regional companies by offering the following combination of services:

- Distinctive Ringing - Terminating Screening (client needs to have a second telephone number)
- Call Forwarding - Variable (or Call Forwarding Busy Line/Don't Answer)

15. 3-Way Call Transfer

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Three Way Call Transfer

16. Speed Calling

This is a request for a service. It is being met by offering the following ONA service:

- Speed Calling

17. Remote Activation of Custom Calling Services

This a general request for a number of services to operate in a particular manner. A specific application of this operation relates to request number 11. It is being met by some regional companies by offering the following ONA services:

- Call Forwarding - Variable - Remote Activation/Control

18. ESP Notification Of ESP's Client Or BOC Control Action

This is a request for a service to operate in a particular manner. This operation requires development.

19. Call Distribution Functions Including Queue

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Multiline Hunt Group
- Multiline Hunt Group - C. O. Announcements
- Multiline Hunt Group - Uniform Call Distribution Line Hunting
- Multiline Hunt Group - UCD With Queuing
- DID Trunk Queuing

20. Derived Local Channels

This is a request for service to be delivered using a particular technology. It is being met by some regional companies by offering the following ONA services:

- Data Over Voice (DOV) Service
- Verify Integrity of Subscriber Lines
- Derived Channels (Monitoring)
- Category 3, Type J - Dedicated Derived Channel BSA

21. Screening

This is a general request for a network capability. Specific applications of this capability relate to request number 7. It is being met by some regional companies by offering the following ONA services:

- Selective Call Forwarding
- Selective Call Rejection

22. Calling Directory Number Delivery

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Calling Directory Number Delivery - via BCLID
- Calling Directory Number Delivery - via ICLID
- Message Desk (SMDI)
- Message Desk (SMDI) - Expanded

23. Delivery of Dialed Number

This is a request for a service. It is being met or partially met by some regional companies by offering the following ONA services:

- Called Directory Number Delivery via DID
- Called Directory Number Delivery via 900NXX

24. Uniform Abbreviated Dialing

This is a request for a service. It is being met or partially met by some regional companies by offering the following service:

- Shared Speed Calling

25. Multiline Hunt Groups

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Multiline Hunt Group
- Multiline Hunt Group - Individual Access To Each Port In Hunt Group
- Multiline Hunt Group - Uniform Call Distribution Line Hunting
- Multiline Hunt Group - UCD With Queuing

26. Unlimited Size Hunt Groups

This is a request for an attribute of a service. It is related to request number 25. It is being met by some regional companies by offering the following ONA services:

- Multiline Hunt Group
- Multiline Hunt Group - Overflow
- Multiline Hunt Group - Uniform Call Distribution Line Hunting
- Multiline Hunt Group - UCD With Queuing

27. Individual Access To Each Port In A Hunt Group

This is a request for service. It is related to request numbers 25 and 26. It is being met by offering the following ONA service:

- Multiline Hunt Group - Individual Access To Each Port In Hunt Group

28. CLASS Features Interoffice

This is a general request for a group of services to operate in a particular manner. It is being met by some regional companies by offering the following ONA services:

- Automatic Callback
- Automatic Recall
- Customer Originated Trace
- Distinctive Ringing
- Selective Call Forwarding
- Selective Call Rejection
- Calling Directory Number Delivery - via ICLID
- Calling Directory Number Delivery - via BCLID

29. Suppressed Ringing

This is a request for a service. This service requires development.

30. Trunk Side Access

This is a request for a service. It is being met by offering the following ONA service:

- Category 1, Type B - Circuit Switched Trunk BSA

It is also being met by some regional companies by offering the following service:

- Trunk Side Access BSA

31. Trunk Side Connection With Power Ringing

This is a request for a service. This service requires development.

32. Access to Extended Superframe Data Channel

This is a request for a particular application of a service. It is being met by some regional companies by offering the following ONA services:

- Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA
- Extended Superframe Conditioning

33. Trunk Group Make Busy

This is a request for a service. It is being met by offering the following ONA service:

- Make Busy Key

34. Message Waiting Indication

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Message Waiting Indicator - Activation (Audible)
- Message Waiting Indicator - Activation (Audible) - Expanded
- Message Waiting Indicator - Activation (Visual)
- Message Waiting Indicator - Activation (Visual) - Expanded
- Message Waiting Indicator - Packet Access
- Message Waiting Indicator (MWI) - Ability To Receive Audible Message Waiting
- Message Waiting Indicator (MWI) - Ability To Receive Visual Message Waiting

35. Answer Supervision (Connect/Disconnect Indications) - Line Side

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Answer Supervision With A Line Side Interface
- Cut Off On Disconnect

36. Night Transfer

This is a request for a particular application of a service. It is related to request number 33. It is being met by offering the following ONA service:

- Make Busy Key

37. Faster Signaling On DID

This is a request for a particular type of signaling on a service. It is related to request number 23. It is being met by some regional companies by offering the following ONA services:

- Called Directory Number Delivery via DID
- Category 1, Type B - Circuit Switched Trunk BSA
- Faster Signaling On DID

38. Post Dialing DTMF Signaling From Paystations

This is a request for a service to operate in a particular manner. Existing coin lines operate in the manner requested. It is being met by some regional companies by offering the following service:

- Coin Phone With Post Dialing Tone Capability

39. Selected Number Reverse Billing Rate Period Specific

This is a request for a service. It is being met or partially met by some regional companies by offering the following ONA services:

- Reverse Billing On Circuit Switched Access
- Reverse Charge Acceptance - Packet
- Uniform 7 Digit Access Number - Remote Call Forwarding
- Coin Phone With Post Dialing Tone Capability

40. Single Number Access For Multiple Locations

This is a request for a service. It is being met or partially met by some regional companies by offering the following ONA services:

- Uniform 7 Digit Access Number - Remote Call Forwarding
- Uniform 7 Digit Access Number via Overlay Networking
- Category 1, Type A - Circuit Switched Line BSA
- Category 1, Type B - Circuit Switched Trunk BSA
- Single Number Access for Multiple Locations

41. Ability To Notify Or Interrupt A Customer

This request is for a particular application of services. It is related to request number 34. It is being met by some regional companies by offering the following ONA services:

- Message Waiting Indicator - Activation (Audible)
- Message Waiting Indicator - Activation (Audible) - Expanded
- Message Waiting Indicator - Activation (Visual)
- Message Waiting Indicator - Activation (Visual) - Expanded
- Message Waiting Indicator - Packet Access
- Message Waiting Indicator (MWI) - Ability To Receive Audible Message Waiting
- Message Waiting Indicator (MWI) - Ability To Receive Visual Message Waiting
- Distinctive Ringing

42. Ability To Return Held Call To Customer

This is a request for a service that requires development.

43. Interconnection For Specialized Terminal Equipment

This is a general request that cannot be met by a particular service. It is being met by some regional companies by the various basic serving arrangements (BSAs). If there are particular applications that are not compatible with the BSAs, they must be specifically identified.

44. Provision For Sharing An ESP Client Among ESPs

This is a request for a particular application of a service. The requested service requires development.

45. Custom Service Areas

This is a request for a particular application of a service. It is related to request number 30. It is being met or partially met by some regional companies by offering an alternative of the following ONA service:

- Category 1, Type A - Circuit Switched Line BSA.
- Category 1, Type B - Circuit Switched Trunk BSA.

It is also being met or partially met by some regional companies by offering the following ONA service:

- Tandem Routing

46. Statistical Multiplexer at Central Office

This is a request for a particular equipment configuration to support a service. It is being met or partially met by some regional companies by offering the following ONA services:

- Category 2, Type A - X.25 Packet Switched BSA
- Category 2, Type B - X.75 Packet Switched BSA
- Statistical Multiplexer

47. X.25 Interface To Packet Switch

This is a request for a service. It is being met by offering the following ONA service:

- Category 2, Type A - X.25 Packet Switched BSA

48. X.75 Interface To Packet Switch

This is a request for a service. It is being met by offering the following ONA service:

- Category 2, Type B - X.75 Packet Switched BSA

49. Access To Data Services

This is a request for a particular application of a service. It is being met or partially met by some regional companies by offering the following ONA services:

- Hot Line
- Warm Line
- Preselection for Data Services

50. B-Channel Switched and Dedicated Access

This is a request for a service that requires development.

51. D-Channel Data Delivered on B-Channel

This is a request for a service that requires development.

52. Multiple D-Channels on B-Channel

This is a request for a service that requires development.

53. ESP Access to D-Channel Signaling

This is a request for a service that requires development.

54. Feature Node Service Interface (FN/SI)

This is a request for a particular interface that requires development.

55. Service Control Point (SCP) Databases

This is a request for a service that requires development.

56. Term Sets and Inband Signaling on Analog Channels

This is a request for a particular interface. It is being met or partially met by some regional companies by offering the following ONA service:

- Category 3, Type C - Dedicated Voice Grade BSA

57. Access to Future Intelligent Functions of ISDN

This is a general request for access to services that may be developed in the future.

58. Compatibility to Existing Terminals

This is a general request that cannot be met by a particular service. It is being met by some regional companies by the various basic serving arrangements (BSAs). If there are particular applications that are not compatible with the BSAs, they must be specifically identified.

59. Mapping ANI to User ID (X.75)

This is a request for a service that requires development.

Updated 9/30/98

60. Calls Accepted With BOC's DNIC or ESP's DNIC

This is a request for an attribute of a service. It is being met or partially met by some regional companies by offering the following ONA service:

- Category 2, Type A - X.25 Packet Switched BSA
- Category 2, Type B - X.75 Packet Switched BSA

61. Equal Access to Exchange Network Switching and Transmission

This is a general request that cannot be met with a particular service. It is being met by various BSAs.

If there are particular applications that are not being met by the services offered by the BSAs, they must be specifically identified.

62. Peak Traffic Handling Within Exchange Network

This is a request for a network management capability that requires development.

63. ESP Defined Dynamic Routing

This is a request for a particular application of a service. It is related to requests number 25 and 33. It is being met or partially met by some regional companies by offering the following ONA services:

- Alternate Routing
- Multiline Hunt Group
- Make Busy Key
- Network Reconfiguration

64. Common Channel Signaling Access

This is a request for a particular type of signaling interface associated with various services. It is being met or partially met by some regional companies by offering the following ONA service:

- Category 1, Type B - Circuit Switched Trunk BSA
- Category 4 - Dedicated Network Access Link BSA

65. Dynamic Allocation of Transmission Capacity

This is a request for a service. It is being met or partially met by some regional companies by offering the following ONA service:

- Network Reconfiguration

66. Provision of BOC network status information.

This is a request for a service that requires development.

67. Real Time Access To Exchange Network Testing Facilities

This is a request for a network management capability. It is being met or partially met by some regional companies by offering the following ONA service:

- Access To Operations Support Systems Information

68. Derived Channels That Comply With UL and NFPA

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Verify Integrity of Subscriber Lines
- Derived Channels (Monitoring)
- Category 3, Type I - Dedicated Alert Transport BSA

69. One Way Alarm Transmission

This is a request for a service. It is being met or partially met by some regional companies by offering the following ONA services:

- Category 3, Type I - Dedicated Alert Transport BSA
- Derived Channels (Monitoring)
- Category 1, Type A - Circuit Switched Line BSA
- Category 1, Type B - Circuit Switched Trunk BSA

70. Derived Channels Compatible with ISDN

This is a request for two services to interact in a compatible manner. This interaction requires development.

71. Digital Private Lines (DDS)

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Category 3, Type F - Dedicated Digital (< 64 kbps) BSA
- Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA
- Multiplexing - Digital

72. Diagnostic Channel on DS0 and Subrate Lines

This is a request for a service. It is being met by offering the following service:

- Secondary Channel Capability

73. Error Detection / Error Correction

This is a request for an attribute of a service. It is related to requests 47 and 48. It is being met or partially met by some regional companies by offering the following services:

- Category 2, Type A - X.25 Packet Switched BSA
- Category 2, Type B - X.75 Packet Switched BSA

74. Ability to Detect Breaks in Telco Line Within 60 Seconds

This is a request for a particular application of a service. It is related to request number 68. It is being met or partially met by some regional companies by offering the following ONA services:

- Verify Integrity of Subscriber Lines
- Derived Channels (Monitoring)
- Category 3, Type I - Dedicated Alert Transport BSA

75. Broadband Link(s) for Video Transmission

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Category 3, Type E - Dedicated Video BSA
- Category 3, Type H - Dedicated High Capacity Digital (>1.544 Mbps) BSA

76. Ability To Reconfigure Networks

This is a request for a service. It is being met by offering the following ONA service:

- Network Reconfiguration

77. Route Diversity

This is a request for an attribute of a service. It is being met or partially met by some regional companies by offering the following ONA services:

- Category 1 - Circuit Switched BSA
- Category 3 - Dedicated Basic Serving Arrangement
- Category 4 - Dedicated Network Access Link BSA
- Automatic Protection Switching
- Network Reconfiguration
- Route Diversity

78. Automatic Protection Switching

This is a request for a service. It is being met by offering the following ONA service:

- Automatic Protection Switching

79. Private Line Conditioning

This is a request for a service. It is being met by offering the following ONA service:

- Conditioning

80. Multiple Monitors per Loop

This is a request for a particular application of a service. It is being met or partially met by some regional companies by offering the following services:

- Category 3, Type I - Dedicated Alert Transport BSA
- Derived Channels (Monitoring)

81. Clear Access To Data Portion of Derived Channels

This is a request for an attribute of a service. It is being met by some regional companies by offering the following services:

- Category 3, Type J - Dedicated Derived Channel BSA

- Category 1, Type A - Circuit Switched Line BSA (Data up to 19.2 kbps Alternative)

82. Distinctive Ringing

This is a request for a service. It is being met by some regional companies by offering the following services:

- Distinctive Ringing
- Distinctive Ringing - Terminating Screening

83. 4-Wire Interconnection/Switching

This is a request for a particular type of interface. It is being met by or partially met by some regional companies by offering the following ONA services:

- Category 1, Type A - Circuit Switched Line BSA
- Category 1, Type B - Circuit Switched Trunk BSA

84. Access to Clear Channel Transmission

This is a request for an attribute of a service. It is being met by some regional companies by offering the following ONA services:

- Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA
- Access To Clear Channel Transmission
- Category 3, Type K - Dedicated Digital (64 kbps) BSA

85. User Initiated Diagnostics

This is a general request for a group of services. These services need to be better defined and then developed. However, this is being met or partially met by some regional companies by offering the following service:

- Access To Operations Support Systems Information

86. Pass Through Diagnostics To User

This is a general request for service. It is being met or partially met by some regional companies by offering the following service:

- Access To Operations Support Systems Information

87. Inband Signaling

This is a request for a particular type of signaling interface. It is related to request number 56. It is being met or partially met by some regional companies by offering the following ONA service:

- Category 3, Type C - Dedicated Voice Grade BSA

88. Bridging

This is a request for a service. It is being met by offering the following ONA service:

- Bridging

89. Monthly Detailed Recording

This is a request for a service. It is being met or partially met by some regional companies by offering the following services:

- Call Detail Recording Reports
- Call Detail Recording Reports (Packet)

90. Automatic Disablement Of Call Waiting Tone During Dial-Up Data Call

This is a request for a service. It is being met or partially met by offering the following ONA service:

- Call Waiting - Cancel

91. Enable / Disable Network DTMF Signaling

This is a request for a service that requires development.

92. Passive In-Band DTMF Tone Transmission

This is a request for a service that requires development.

93. Extend DTMF Tone Set

This is a request for a service that requires development.

94. Tone to Digital Translation

This is a request for a service to operate in a particular manner. This requires development.

95. Multiple Call Forwarding

This is a request for a service to operate in a particular manner. It is related to requests number 1 and 4. It is being met by some regional companies by offering the following ONA services:

- Call Forwarding - Multiple Simultaneous Calls Interswitch

96. Virtual Dial Tone

This is a request for a particular attribute of a service. It is related to requests number 47 and 48. It is being met by some regional companies by offering the following services:

- Category 2, Type A - X.25 Packet Switched BSA
- Category 2, Type B - X.75 Packet Switched BSA

97. Remote Access to User Programmable Functions (Packet)

This is a request for a service that requires development.

98. Remote Speed Call Menu Builder (Packet)

This is a request for a service that requires development.

99. Speed Call Menu Builder (Packet)

This is a request for a service that requires development.

100. Remote Speed Call Menu Access Translator (Packet)

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Menu Access Translator - Gateway

101. Carrier Selection On Reverse Charge

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Carrier Selection on Reverse Charge

It is also being met or partially met by some regional companies by offering an alternative of the following ONA services:

- Category 1, Type A - Circuit Switched Line BSA
- Category 1, Type B - Circuit Switched Trunk BSA (800 dialing plan alternative)

102. Network Control By Customer From Customer Premises

This is a request for service that requires development.

103. Real Time Traffic Usage Data

This is a general request for a service. It is being met or partially met by some regional companies by offering the following service:

- Access To Operations Support Systems Information

104. Central Office Announcements

This is a request for an attribute of a service. It may be related to request number 25. It is being met or partially met by some regional companies by offering the following ONA services:

- Multiline Hunt Group
- Multiline Hunt Group - C. O. Announcements
- Multiline Hunt Group - Uniform Call Distribution Line Hunting
- Multiline Hunt Group - UCD with Queuing

105. Name & Address of the Calling Party

This is a general request for a service. It is being met or partially met by some regional companies by offering the following service:

- Name of Calling Party

106. Suppression of Audible Click on Call Forwarding (Interoffice)

This is a request for an attribute of a service that requires development.

107. Billing Number Delivery

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Calling Billing Number Delivery - FG B Protocol
- Calling Billing Number Delivery - FG D Protocol

108. Privacy (Classes Of Non-Published Service)

This is a request for a service that requires development.

109. Delivery Of Traveling Class Mark

This is a request for an attribute of a service. It is related to request number 107. It is being met or partially met by some regional companies by offering the following ONA services:

- Calling Billing Number Delivery - FG D Protocol
- Flexible ANI Information Digits

110. User ID Associated With Calling Number And/Or Service ID Code

This is a request for a service that requires development.

111. Warm Line

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Warm Line

112. Closed User Group (Packet)

This is a request for a service. It is being met by offering the following ONA service:

- Closed User Groups - Packet

113. Fast Select (Packet)

This is a request for a service. It is being met by some regional companies by offering the following ONA services:

- Fast Select Acceptance - Packet
- Fast Select Request - Packet

114. Hunt Group (Packet)

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Hunt Groups - Packet

115. Call Redirection (Packet)

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Call Redirection - Packet

116. Direct Call (Packet)

This is a request for a service. It is being met by some regional companies by offering the following ONA service:

- Direct Call - Packet

117. Programmed Default Call Forwarding

This is a request for a service that requires development.

118. Restriction of Outgoing Calls (Packet)

This is a request for a service that requires development.

Appendix B: Individual Regional Company Responses to the 118 ESP Requests

ESP REQUEST FOR NETWORK CAPABILITY	AM	BA	BS	NX	PB	SW	US
1. Call Forwarding Busy Line/Don't Answer	CNS	CNS	CNS	CNS	CNS	CNS	CNS
2. Activation Of CF Variable Without Call Completion	CNS	CNS	CNS	CNS	CNS		CNS
3. Call Forward Don't Answer Interoffice	CNS	CNS	CNS	CNS	CNS	CNS	CNS
4. Multiple Calls Forwarded To DID Interoffice	CNS	CNS	CNS	CNS	CNS	CNS	CNS
5. Call Forwarding With Status Information To Answering Bureau	BSE	BSE	BSE	BSE	BSE		BSE
6. Activation of Call Forwarding Variable With Call Completion	CNS	CNS	CNS	CNS	CNS	CNS	CNS
7. Call Forwarding With Call Screening		CNS	CNS		CNS/ BSE	CNS	CNS
8. Call Forwarding With Call Waiting			CNS	CNS	CNS		CNS
9. Call Forwarding With Called and Calling Number	BSE	BSE	BSE	BSE	BSE		BSE
10. Call Forward Don't Answer With Variable Ring Counts	CNS	CNS	CNS	CNS	CNS	CNS	CNS
11. Customer Control of CFBL/CFDA	CNS		CNS	CNS	CNS		CNS
12. Monitor & Barge In							
13. SMDI	BSE	BSE	BSE	BSE	BSE		BSE
14. SMDI With Automatic Ringback							CNS
15. 3-Way Call Transfer	BSE	BSE	BSE/ CNS	BSE	BSE		BSE
16. Speed Calling	CNS	CNS	CNS	CNS	CNS	CNS	CNS
17. Remote Activation of Custom Calling Services	CNS	CNS	CNS	CNS	CNS	CNS	CNS
18. ESP Notification Of ESP's Client Or BOC Control Action							
19. Call Distribution Functions Including Queue	BSE	BSE	BSE	BSE	BSE	BSE	BSE
20. Derived Local Channels	CNS/ BSE	CNS/ BSA	CNS	BSA	CNS/ BSE	CNS/ BSA	BSA
21. Screening	CNS	CNS	CNS		CNS/ BSE	CNS	CNS
22. Calling Directory Number Delivery	BSE	BSE	BSE/ CNS	BSE/ CNS	BSE	CNS	BSE
23. Delivery of Dialed Number	BSE	BSE	BSE/ CNS	BSE/ CNS	BSE	BSA	BSE
24. Uniform Abbreviated Dialing		CNS			CNS		CNS
25. Multiline Hunt Groups	BSE	BSE	BSE/ CNS	BSE	BSE	BSE	BSE
26. Unlimited Size Hunt Groups	BSE	BSE	BSE/ CNS	BSE	BSE	BSE	BSE
27. Individual Access To Each Port In A Hunt Group	BSE	BSE	BSE/ CNS	BSE	BSE	BSE	BSE

ESP REQUEST FOR NETWORK CAPABILITY	AM	BA	BS	NX	PB	SW	US
28. CLASS Features Interoffice	CNS	CNS	CNS/ BSE	CNS	CNS/ BSE	CNS	CNS/ BSE
29. Suppressed Ringing							
30. Trunk Side Access	BSA	BSA	BSA	BSA	BSA	BSA	BSA
31. Trunk Side Connection With Power Ringing							
32. Access to Extended Superframe Data Channel	BSE	BSA	BSA	BSA	BSA	BSE	BSA
33. Trunk Group Make Busy	BSE	BSE	BSE/ CNS	BSE	BSE	BSE	BSE
34. Message Waiting Indication	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS
35. Answer Supervision (Connect/Disconnect Indications) - Line	BSE	BSE	BSE		BSE		BSE
36. Night Transfer	BSE	BSE	BSE/ CNS	BSE/ CNS	BSE	BSE	BSE
37. Faster Signaling On DID		BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE	BSA	BSA
38. Post Dialing DTMF Signaling From Paystations	YES	YES	BSA	CNS	YES	CNS	.BSA
39. Selected Number Reverse Billing Rate Period Specific	BSE	BSE			BSE	BSE	BSE
40. Single Number Access For Multiple Locations		BSE	CNS				BSA
41. Ability To Notify Or Interrupt A Customer	BSE/ CNS	BSE/ CNS	BSE	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS
42. Ability To Return Held Call To Customer							
43. Interconnection For Specialized Terminal Equipment	BSA	BSA	BSA	BSA	BSA	BSA	BSA
44. Provision For Sharing An ESP Client Among ESPs							
45. Custom Service Areas	BSA	BSE	BSE	BSA	BSA		BSE
46. Statistical Multiplexer at Central Office	BSA	BSA/ BSE			BSA	BSA	BSA
47. X.25 Interface To Packet Switch	BSA	BSA	BSA	BSA	BSA	BSA	BSA
48. X.75 Interface To Packet Switch	BSA	BSA	BSA	BSA	BSA	BSA	BSA
49. Access To Data Services	CNS	CNS/ BSE	CNS	BSE/ CNS	CNS/ BSE	CNS	CNS
50. B-Channel Switched and Dedicated Access							
51. D-Channel Data Delivered on B-Channel							
52. Multiple D-Channels on B-Channel							
53. ESP Access to D-Channel Signaling							
54. Feature Node Service Interface (FN/SI)							
55. Service Control Point (SCP) Databases							

ESP REQUEST FOR NETWORK CAPABILITY	AM	BA	BS	NX	PB	SW	US
55. Service Control Point (SCP) Databases							
56. Term Sets and Inband Signaling on Analog Channels	BSA	BSA	BSA	BSA	BSA	BSA	BSA
57. Access to Future Intelligent Functions of ISDN							
58. Compatibility to Existing Terminals	BSA	BSA	BSA	BSA	BSA	BSA	BSA
59. Mapping ANI to User ID (X.75)							
60. Calls Accepted With BOC's DNIC or ESP's DNIC	BSA	BSA			BSA	BSA	BSA
61. Equal Access to Exchange Ntwk Switching and Transmission	BSA	BSA	BSA	BSA	BSA	BSA	BSA
62. Peak Traffic Handling Within Exchange Network							
63. ESP Defined Dynamic Routing	BSE	BSE	BSE/CNS	BSE	BSE	BSE	BSE
64. Common Channel Signaling Access	BSA			BSA	BSA		BSA
65. Dynamic Allocation of Transmission Capacity			BSE/CNS				
66. Provision of BOC Network Status Information							
67. Real Time Access To Exchange Network Testing Facilities			BSE/CNS				
68. Derived Channels That Comply With UL and NFPA	CNS/BSE	CNS	BSA	CNS	BSE/CNS		CNS
69. One Way Alarm Transmission	CNS	BSA/CNS	BSA	BSA	BSA	BSA	CNS
70. Derived Channels Compatible with ISDN							
71. Digital Private Lines (DDS)	BSA	BSA	BSA	BSA	BSA	BSA	BSA
72. Diagnostic Channel on DS0 and Subrate Lines	BSE	BSE	BSE/CNS	BSE	BSE	BSE	BSE
73. Error Detection / Error Correction	BSA	BSA	BSA	BSA	BSA	BSA	BSA
74. Ability to Detect Breaks in Telco Line Within 60 Seconds	CNS/BSE	CNS/BSA		BSA	CNS/BSE		CNS
75. Broadband Link(s) for Video Transmission	BSA	BSA	BSA	BSA	BSA	BSA	BSA
76. Ability To Reconfigure Networks	BSE	BSE	BSE/CNS	BSE	BSE	BSE	BSE
77. Route Diversity	BSA/BSE	BSA	BSE/CNS	BSE	BSA	BSE	BSE
78. Automatic Protection Switching	BSE	BSE	BSE/CNS	BSE	BSE	BSE	BSE
79. Private Line Conditioning	BSE	BSE	BSE/CNS	BSE	BSE	BSE	BSE
80. Multiple Monitors per Loop	BSE/CNS			CNS	CNS		CNS
81. Clear Access To Data Portion of Derived Channels	BSA	BSA	BSA	BSA	BSA		BSA
82. Distinctive Ringing	CNS	CNS	CNS		CNS	CNS	CNS

ESP REQUEST FOR NETWORK CAPABILITY	AM	BA	BS	NX	PB	SW	US
83. 4-Wire Interconnection/Switching	BSA	BSA		BSA	BSA	BSA	BSA
84. Access to Clear Channel Transmission	BSE/BSA	BSE	BSA	BSE	BSE	BSE	BSE
85. User Initiated Diagnostics			BSE/CNS				
86. Pass Through Diagnostics To User			BSE/CNS				
87. Inband Signaling	BSA	BSA	BSA	BSA	BSA	BSA	BSA
88. Bridging	BSE	BSE	BSE/CNS	BSE	BSE	BSE	BSE
89. Monthly Detailed Recording		BSE	BSE	AN/BSE/CNS		AN/BSE	BSE
90. Auto Disable Of Call Wtng Tone During Dial-Up Data Call	CNS	CNS	CNS	CNS	CNS	CNS	CNS
91. Enable / Disable Network DTMF Signaling							
92. Passive In-Band DTMF Tone Transmission							
93. Extend DTMF Tone Set							
94. Tone to Digital Translation							
95. Multiple Call Forwarding	CNS	CNS	CNS	CNS	CNS	CNS	CNS
96. Virtual Dial Tone	BSA	BSA	BSA	BSA	BSA	BSA	BSA
97. Remote Access to User Programmable Functions (Packet)							
98. Remote Speed Call Menu Builder (Packet)							
99. Speed Call Menu Builder (Packet)							
100. Remote Speed Call Menu Access Translator (Packet)							BSE
101. Carrier Selection on Reverse Charge	BSA	BSE	BSA	BSE	BSE		BSA
102. Network Control By Customer From Customer Premises							
103. Real Time Traffic Usage Data			BSE/CNS				
104. Central Office Announcements	BSE	BSE	BSE	BSE	BSE	BSE	BSE
105. Name & Address of the Calling Party			CNS				
106. Suppression of Audible Click on Call Fwding Interoffice							
107. Billing Number Delivery	BSE	BSE	BSE	BSE	BSE	BSE	BSE
108. Privacy (Classes Of Non-Published Service)							
109. Delivery Of Traveling Class Mark	BSE	BSE	BSE	BSE	BSE	BSE	BSE
110. User Nmbr Assoc. With Calling Nmbr and/or Svc ID Code							

ESP REQUEST FOR NETWORK CAPABILITY	AM	BA	BS	NX	PB	SW	US
111. Warm Line	CNS	CNS	CNS	BSE/ CNS	CNS	CNS	CNS
112. Closed User Group (Packet)	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE	BSE	BSE
113. Fast Select (Packet)	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE/ CNS	BSE	BSE
114. Hunt Group (Packet)	BSE	BSE	BSE/ CNS	BSE/ CNS	BSE	BSE	BSE
115. Call Redirection (Packet)	BSE	BSE	BSE/ CNS	BSE/ CNS	BSE	BSE	BSE
116. Direct Call (Packet)	CNS	CNS	CNS/ BSE	BSE/ CNS	CNS	CNS	CNS
117. Programmed Default Call Forwarding							
118. Restriction of Outgoing Calls (Packet)							

AN = ancillary service

BELL OPERATING COMPANIES

Service Descriptions

ONA Services User Guide

July 31, 1998

ONA Services

Names, Descriptions, Cross References

FOREWORD

Attached is the Services Descriptions section of the ONA Services User Guide, an update of information that was previously issued on January 31, 1998.

The Services Descriptions section of the ONA Services User Guide represents an agreement on the part of the BOCs for uniform names and technical descriptions of the Basic Serving Arrangements (BSAs), Basic Service Elements (BSEs) and Complementary Network Services (CNSs) that relate to the ESP requests included in BOC ONA Special Report Number 1, Issue 2 (October 1987). That Special Report is a compilation of the 118 requests received by all the BOCs during the input process for ESP requests prior to filing of the 2/1/88 ONA Plans. Some items, marked with an asterisk (*) in their titles, have been deleted after the last issue of the report based on the availability of updated information indicating that they cannot be offered. For each service listed, a table is provided that gives an indication of which BOCs plan to offer the service, the individual BOC's product name, and whether the BOC classifies the service as a BSA, BSE or CNS.

The BSAs, which respond to the 118 ESP requests for ONA services, are listed in the following four categories of Basic Serving Arrangements:

- Circuit Switched Serving Arrangements

  A circuit switched basic serving arrangement (BSA) provides an enhanced service provider (ESP) with a connection to the circuit switched network.

- Packet Switched Serving Arrangements

  A packet switched BSA provides an ESP with a connection to the packet switched network.

- Dedicated Serving Arrangements

  A dedicated BSA provides an ESP with a dedicated point-to-point connection through the network.

- Dedicated Network Access Link Serving Arrangements

  A dedicated network access link (DNAL) BSA provides a dedicated data channel between the ESP's termination and a designated central office which contains the specific features required by the ESP. The DNAL is used to transmit control information from the ESP to the network or to deliver information from the network to the ESP.

Following the BSAs are the BSEs and CNSs, which are listed in alphabetical order in the above four BSA categories. These BSEs and CNSs respond to the 118 ESP requests for ONA services that were made to all BOCs. A description of each BSE or CNS is provided, which includes a brief technical description and a table listing the product name for each company that offers the service.

Appendix 1 contains a set of descriptions of ONA services that are offered by one or more BOC in response to requests received independent of the 118 ESP requests received by all BOCs. Included is a technical description and a table with the product name for each company that offers the service.

Appendix 2 contains a list of BOC contacts.

Appendix 3 contains the BSA Matrix, a report that shows the relationship between the BSAs and the BSEs included in the ONA Services User Guide. Included is a table showing the generic name for each BSA, and the specific name used by each company offering the BSA. Also included is a set of tables, one for each BSA, listing which BSEs are associated with the BSA for each company. These matrices only include generic BSAs and BSEs, and do not include the CNSs or any region specific services.

This report does not supersede any information provided in the BOC ONA plans and amendments. All capabilities described are not available in all switching or transmission systems. Generic descriptions of BSAs do not imply that applicable generic functions and capabilities are available or compatible with all types of BSAs. In addition, generic descriptions are intended for informational purposes and their existence does not imply that specific products and/or services are necessarily tariffed and/or available in any or all state/ federal jurisdictions within a particular company's service area. The BSAs, BSEs and CNSs identified in this report cannot be ordered until appropriate tariffs are effective. Some ONA services may not be tariffed in all areas. The reader should refer to the individual BOC ONA plans and amendments or the BOC contacts listed in Appendix 2 to this report for information on BOC availability and deployment plans for the technical capabilities described in this report.

References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

Technical references that are publicly available are listed for each service, where available. Ordering information for each of the technical references may be found in the *Bellcore Digest of Technical Information* (including ordering information for reference documents published by individual regional companies). To order, call 1-800-521-2673 toll free from anywhere in the USA; call (732) 699-5800 for foreign calls; fax (732) 336-2559.

Recently, various BOCs have completed, or are in the process of completing, corporate mergers. For this document, the old company names will continue to be used (for example, Bell Atlantic and NYNEX are listed separately; Southwestern Bell and Pacific Bell are listed separately).

Questions on this report should be directed to the BOC contacts listed in Appendix 2 to this report.

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BSA Descriptions

BSAs have been arranged into four categories:

1. Circuit Switched

2. Packet Switched

3. Dedicated

4. Dedicated Network Access Link

Each category may have several types. Following are descriptions of the BSA categories and the associated BSA types.

1. Category 1 - Circuit Switched BSA

A circuit switched basic serving arrangement (BSA) provides an enhanced service provider (ESP) with a connection to the circuit switched network. This BSA is capable of supporting analog signals of approximately 300 to 3000 Hz or a circuit switched digital interface with a call type of digital encoded voice, 3.1 kHz or 7 kHz audio, 56 kbps or 64 kbps data transmission. This BSA may also transmit voice grade analog data. The transmission interface may be 2-wire or 4-wire, or derived from a variety of multiplexing alternatives (for example, Digital Signal (DS) level 0 from DS level 1, or DS1 from DS3).

This BSA may support one-way or two-way directionality. Calls are set up and taken down on a call by call basis. The transport/usage element could be intra-office or inter-office.

Route diversity may be available with this serving arrangement.

1.1 Category 1, Type A - Circuit Switched Line BSA (1039)

Service Description

A circuit switched line BSA provides an ESP with a line side connection to the circuit switched network.

This line side connection could include alternative types of network connection, address and supervisory in-band or out-of-band signaling. Examples of network connections are standard telephone line or a line side type connection (e.g., PBX service). This BSA may support one-way or two-way directionality on a 2-wire or 4-wire transmission interface.

Calls are set up and taken down on a call by call basis. The calling scope may include, for example, an entire Local Access and Transport Area (LATA), a market area or be limited to all or part of a metropolitan area. Directory numbers are assigned from the North American Numbering Plan without any special routing or other use of the number.

Generic Name of BSA	Regional Company BSA Name
Category 1, Type A - Circuit Switched Line BSA*	AM - Circuit Switched Line
	BA - Business Individual Line
	BA - Line Side BSA
	BS - Voice Grade - Line - Circuit Switched
	NX - Circuit Switched - Line
	PB - Access Line Arrangement
	SWB - Circuit Switched - Line Side Basic Serving Arrangement (BSA-A)
	USW - Voice Grade - Line - Circuit Switched

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* Based on the Federal Communications Commission (FCC) CC Docket 89-79 Order dated July 11, 1991, there will be a new line side BSA on FCC approval of tariffs submitted November 1, 1991.

Voice Grade – Line – Circuit Switched — BSA
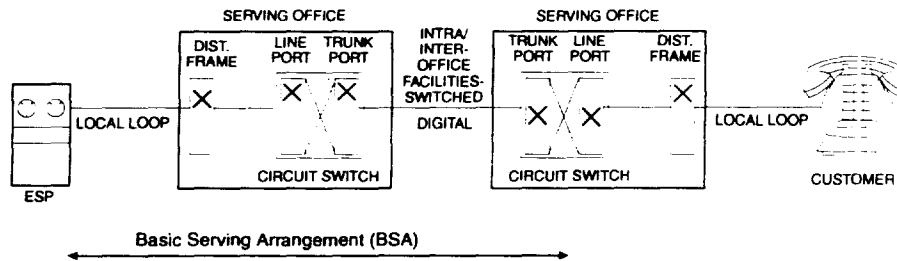
Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Service Code Denial and Uniform Call Distribution.

Signaling

Signaling arrangements extend line circuit or signaling circuit alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. The signaling arrangement can be terminated on trunk-like or line side interfaces of the LEC switch. Examples of address signaling on an analog interface are dial pulse or dual tone multifrequency (DTMF) with supervisory signaling of loop start or ground start. A digital interface will offer address and supervisory signaling via an out-of-band standardized protocol.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-334-CORE, Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994 (replaces TR-NWT-000334, Issue 3)

- U S WEST's document 77316 Pacific Northwest Bell's Addendum to Voice Grade Switched Access Service TR-NPL-000334, April 1986.

1.2 Category 1, Type B - Circuit Switched Trunk BSA (1040)

Service Description

A circuit switched trunk BSA provides an enhanced service provider (ESP) with a trunk side connection to the circuit switched network.

Various types of network connections, address signaling and supervisory signaling are available. An example of network connections to the serving office may be direct trunk or a tandem connection. Calls are set up and taken down on a call-by-call basis. Different access arrangements, based on the North American Numbering Plan, are available from the Local Exchange Carriers (LEC). This BSA may support one-way or two-way directionality.

Generic Name of BSA	Regional Company BSA Name
Category 1, Type B - Circuit Switched Trunk BSA	AM - Circuit Switched Trunk
	BA - Trunkside BSA - 950 Option
	BA - Trunkside BSA - 10XXX Option
	BS - Circuit Switched Trunk - Voice Grade
	NX - Circuit Switched Trunk
	PB - Access Trunk Arrangement (950)
	PB - Access Trunk Arrangement (10XXX)
	SWB - Circuit Switched - Trunk Side Alternative B Basic Serving Arrangement (BSA-B)
	SWB - Circuit Switched - Trunk Side Alternative D Basic Serving Arrangement (BSA-D)
	USW - Voice Grade - Trunk - Circuit Switched

Voice Grade – Trunk – Circuit Switched — BSA
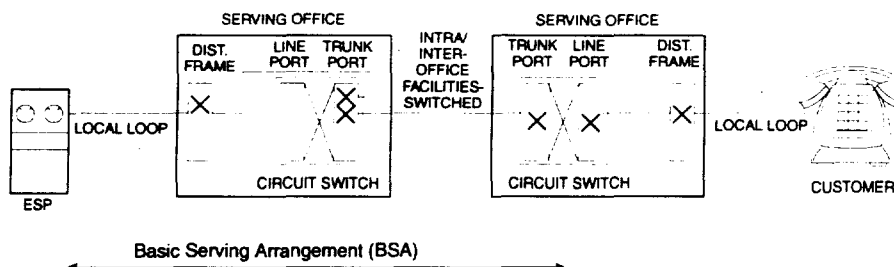
Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the LECs. Refer to the individual LEC tariff reference diskette for the reference information where LEC

defined alternatives may be found. Examples of potential alternatives may be: Service Class Routing, Dial Pulse Address Signaling, and Cut Through.

Signaling

Signaling arrangements extend trunk circuit or signaling circuit alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. These signals are the means by which the end user initiates a request for service, holds a connection or releases a connection. The signaling arrangements can be terminated on line-like or trunk side interfaces of the LEC switch. Examples of point-of-termination supervisory signaling arrangements that may be ordered are Multi-Frequency (in-band), Signaling System 7 (SS7) (out of band), reverse battery and E&M.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-334-CORE, Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994 (replaces TR-NWT-000334, Issue 3)

- TR-TSY-000698 Feature Group B FSD 20-24-0300, Issue 1, June 1989, Rev. 1, July 1990

- LSSGR FR-64 (formerly FR-NWT-000064), FSD 20-24-0000, IC/INC Interconnection, Issue 1, March 1991, Module TR-TSY-000690

- TR-NPL-000258 Compatibility Information for Feature Group D Switched Access Service, Issue 1, October 1985.

- SR-NPL-001321 Connection Setup Time for Feature Group D and Termination Feature Group B, Special Report, Issue 1, February 1989.

- Ameritech reference: AM TR-TMO-000094 Switched Access Service Feature Group D, August 1992. (Written as a companion document to TR-NWT-000334, Switched Access Service: Transmission Parameter Limits and Interface Combinations.)

References for SS7

- GR-905 Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and ISDN User Part (ISDNUP), Issue 2, Rev01 - December 1997 (replaces TR-TSV-000905)

- TR-NWT-000394 Switching System Generic Requirements for Interexchange Carrier Interconnection Using the Integrated Services Digital Network User Part (ISDNUP) (A module of LSSGR FR-64), Issue 2, December 1997

References for Signaling Arrangements

- TA-NPL-000912 Compatibility Information for Telephone Exchange Service, Issue 1, February 1989.
- SR-2275 Bellcore Notes on the Networks, Issue 3, December 1997 (replaces SR-TSV-02275, Issue 2)

2. Category 2 - Packet Switched Basic Serving Arrangement

A packet switched BSA provides an ESP with a connection to the packet switched network via virtual and permanent virtual circuit connections. This BSA is capable of supporting analog or digital signals of various transmission rates. The transmission interface may be 2-wire or 4-wire, or derived from a variety of multiplexing alternatives (for example, Digital Signal (DS) level 0 from DS level 1. or DS1 from DS3).

2.1 Category 2, Type A - X.25 Packet Switched BSA (1001)

Service Description

The Type A Packet Switched BSA provides an ESP with X.25 or X.31 access to the BOC packet switching network via virtual and permanent virtual circuit connections. This interface conforms to Recommendations X.25 and X.31 of the International Telecommunication Union-Telecommunication Standardization Sector (ITU-TS) (formerly the International Telegraph and Telephone Consultative Committee [CCITT]).

X.25 includes physical. link and packet level procedures. At the physical level, data signaling rates of 1.2, 2.4, 4.8, 9.6 and 56 kbps are supported. The link level protocol supported at the interface is Link Access Protocol Balanced (LAPB). The main functions of the link level protocol are to ensure that the packets cross the Data Terminal Equipment/Data Communications Equipment (DTE/DCE) interface essentially error free and reach their destination in a correctly transmitted sequence. The network level access protocol provides the procedures required to set up, maintain and clear virtual calls. X.31 defines the recommended procedures for using Q.931 protocol to establish digital customer premises equipment (CPE) calls to a packet network in accordance with defined bearer services.

Generic Name of BSA	Regional Company BSA Name
Category 2, Type A - X.25 Packet Switched BSA	AM - Packet Switched Network Service (X.25)
	BA - Public Data Network: X.25
	BS - PulseLink® Packet Switching - X.25
	NX - INFOPATH® Packet Switching Service
	PB - Public Packet Switching (X.25)
	SWB - Packet Switched - MicroLink II^{SM} (X.25 Version)
	USW - Packet Switching (X.25)

® PulseLink is a registered trademark of BellSouth.

® INFOPATH is a registered service mark of NYNEX.

SM MicroLink II is a registered service mark of Southwestern Bell Telephone.

Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Logical Channel, Flow Control Parameters, and Multiple Network Addresses.

Signaling

Signaling arrangements extend alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. Dial (circuit-switched) access provides low- to moderate-throughput Public Packet Switched Network (PPSN) access through the voice telephone network. With dial-in access, a customer terminal and modem are attached to the Public Switched Telephone Network (PSTN) loop. The customer dials a North American Numbering Plan (NANP) address and the PSTN routes the call to a PPSN dial-up port. The PPSN answers the call with a modem supporting one of several modem protocols.

With dial-out access, a call is routed to a PPSN interface supporting dial-out service. At this interface, the access concentrator obtains the NANP address and uses the ITU-TS (formerly CCITT) V.25 calling procedures to instruct the PPSN modem to establish a physical connection with the customer via the PSTN.

Dedicated (nonswitched) access provides the customer with continuously available interfaces to the PPSN.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-301 Public Packet Switched Network Generic Requirements (PPSNGR) (replaces TR-TSY-301, Issue 2), Issue 2, December 1997

- TR-NPL-000011 Asynchronous Terminal and Host Interface Reference, Issue 1, March 1985

- Ameritech TR-NPL-000001 Public Packet Services Technical Interface Specifications, Issue 2, September 1988

- Ameritech TR-NPL-000002 Technical Interface Specifications for X.25 Service, Issue 2, May 1988

- Ameritech TR-NPL-000003 Technical Interface Specifications for Asynchronous Service, Issue 2, May 1988

- Ameritech TR-NPL-000007 Digital Service Interface Specifications, Type 1, Issue B, December 1988

- Bell Atlantic TR 72211 Interface Specification For The Bell Atlantic Public Data Network, Issue C, December 1991

- BellSouth TR-73513 PulseLink® X.25 Interface Specification, Issue A, June 1987

- BellSouth TR-73516 PulseLink® Physical Interface Specification, Issue C, September 1991

- NYNEX NTR-74250 INFOPATH® Packet Switching Service X.25 Interface Specification, Issue 2, January 1988

- NYNEX NTR-74252 INFOPATH® Packet Switching Service Asynchronous Interface Specification, Issue 2, January 1988

- Pacific Bell PUB L-780060-PB Public Packet Switching (PPS) - Technical Interface Specification, Issue 1, August 1989

- Southwestern Bell Telephone Technical Publication TP 76800, MicroLink II^{SM} X.25/X.75 Reference, Issue 4, September 1994

- U S WEST USWTR 77359 DIGIPAC® Service Interface Specifications For Public Packet Switching Network, Issue E, May 1994

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® DIGIPAC is a registered service mark of U S WEST.

2.2   Category 2, Type B - X.75 Packet Switched BSA (1002)

<u>Service Description</u>

The Type B Packet Switched BSA provides an ESP with X.75 access to the BOC packet switching network. The X.75 interface conforms to Recommendation X.75 of the International Telecommunication Union-Telecommunication Standardization Sector (ITU-TS) (formerly the International Telegraph and Telephone Consultative Committee [CCITT]).

X.75 includes physical, link and packet level procedures. At the physical level data signaling rates of 9.6 kbps are supported over analog or digital facilities. Speeds of 56 kbps are supported over digital facilities only. The link level protocol supported at the interface is Link Access Protocol Balanced (LAPB). The main functions of the link level protocol are to ensure that the packets cross the network interface essentially error free and reach their destination in a correctly transmitted sequence. The network level access protocol provides the procedures required to set up, maintain and clear virtual calls.

Generic Name of BSA	Regional Company BSA Name
Category 2, Type B - X.75 Packet Switched BSA	AM - Packet Switched Network Service (X.75) BA - Public Data Network: X.75 BS - PulseLink® Packet Switching - X.75 NX - INFOPATH® Packet Switching Service PB - Public Packet Switching (X.75) SWB - Packet Switched - MicroLink II^{SM} (X.75 Version) USW - Packet Switching (X.75)

Packet Switching BSA

Basic Serving Arrangement (BSA)

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Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Logical Channel, Flow Control Parameters, and Multiple Network Addresses.

Signaling

Signaling arrangements extend alerting information on metallic or fiber facilities from one customer premises location to another customer premises location. Dial (circuit-switched) access provides low- to moderate-throughput Public Packet Switched Network (PPSN) access through the voice telephone network. With dial-in access, a customer terminal and modem are attached to the Public Switched Telephone Network (PSTN) loop. The customer dials a North American Numbering Plan (NANP) address and the PSTN routes the call to a PPSN dial-up port. The PPSN answers the call with a modem supporting one of several modem protocols.

With dial-out access, a call is routed to a PPSN interface supporting dial-out service. At this interface, the access concentrator obtains the NANP address and uses the ITU-TS (formerly CCITT) V.25 calling procedures to instruct the PPSN modem to establish a physical connection with the customer via the PSTN.

Dedicated (nonswitched) access provides the customer with continuously available interfaces to the PPSN.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interface

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-301 Public Packet Switched Network Generic Requirements (PPSNGR) (replaces TR-TSY-301, Issue 2), Issue 2, December 1997

- TR-NPL-000011 Asynchronous Terminal and Host Interface Reference, Issue 1, March 1985

- Ameritech TR-NPL-000001 Public Packet Services Technical Interface Specifications, Issue 2, September 1988

- Ameritech TR-NPL-000003 Technical Interface Specifications for Asynchronous Service, Issue 2, May 1988

- Ameritech TR-NPL-000007 Digital Service Interface Specifications, Type 1, Issue B, December 1988

- Ameritech TR-NPL-000016 Technical Interface Specifications for X.75 Service, Issue 2, May 1988

- Bell Atlantic TR 72211 Interface Specification For The Bell Atlantic Public Data Network, Issue C, December 1991

- BellSouth TR-73515 PulseLink® X.75 Interface Specification, Issue B, April 1991

- BellSouth TR-73516 PulseLink® Physical Interface Specification, Issue C, September 1991

- NYNEX NTR-74250 INFOPATH® Packet Switching Service X.25 Interface Specification, Issue 2, January 1988

- Pacific Bell PUB L-780060-PB Public Packet Switching (PPS) - Technical Interface Specification, Issue 1, August 1989

- Southwestern Bell Telephone Technical Publication TP 76800, MicroLink II^{SM} X.25/X.75 Reference, Issue 4, September 1994

- U S WEST USWTR 77359 DIGIPAC® Service Interface Specifications For Public Packet Switching Network, Issue E, May 1994

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3. Category 3 - Dedicated Basic Serving Arrangement

A dedicated BSA provides an ESP with a dedicated point-to-point connection through the network. This category of serving arrangements are available full-time so that individual calls are not set up and taken down. This BSA is capable of supporting analog or digital signals at various transmission rates. The transmission interface may be 2-wire or 4-wire, or derived from a variety of multiplexing alternatives (for example, Digital Signal (DS) level 0 from DS level 1, or DS1 from DS3). It is also capable of providing supervisory signaling in some configurations.

Route diversity may be available with this serving arrangement.

3.1 Category 3, Type A - Dedicated Metallic BSA (1015)

Service Description

The Dedicated Metallic BSA provides a non-switched channel between the ESP and the ESP's client for the transmission of low speed varying signals at rates up to 30 baud. This service can only be provided where metallic facilities are available.

Metallic dedicated services are nonswitched services used for applications such as alarm, pilot wire protective relaying, and direct current (DC) tripping protective relaying. Interoffice metallic facilities will be limited in length to a total of five miles per channel. Metallic dedicated service (called MT1 in TR-NPL-000336 reference documentation) provides a metallic or equivalent pair between an end user and the service provider's point of termination.

Metallic dedicated service MT1 may have a second end user point of termination bridged to the first.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type A - Dedicated Metallic BSA	BA - Dedicated Metallic NX - Dedicated - Metallic PB - Metallic Service SWB - Special Access - Metallic USW - Analog PLS - DCCS

Dedicated – Private Line – BSA
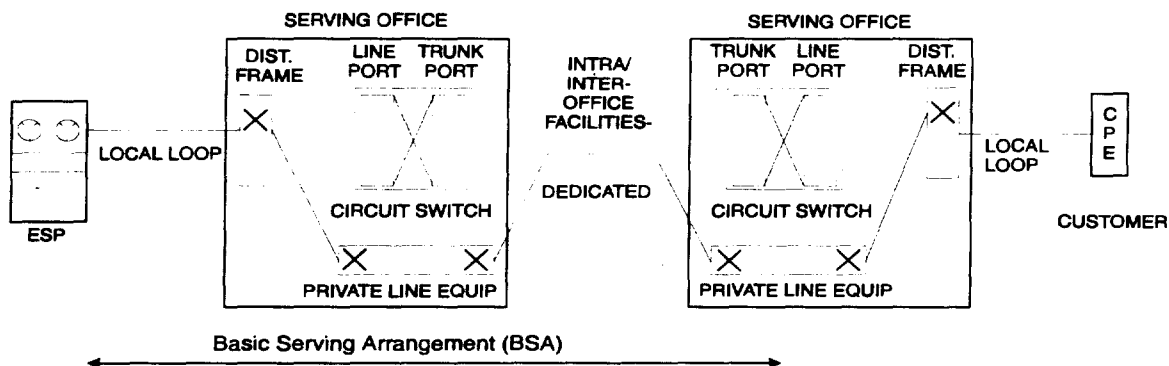
Basic Serving Arrangement (BSA)

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Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be provision of services between customer designated premises through serving wire centers or between a customer designated premises and a telephone company hub.

Signaling

Metallic dedicated serving arrangements are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical interface with the LEC for metallic services is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

Reference

- TR-NPL-000336 Metallic and Telegraph Grade Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987

3.2 Category 3, Type B - Dedicated Telegraph BSA (1016)

Service Description

The Dedicated Telegraph BSA provides a non-switched channel between the ESP and the ESP's client for the transmission of binary signals at rates of 0 to 75 baud or 0 to 150 baud.

Telegraph dedicated services are nonswitched services used for applications such as teletypewriter, telegraph grade control/remote metering, telegraph grade channel, telegraph grade extension, and telegraph grade entrance facilities. Certain applications must be provided using metallic facilities, and may only be offered where appropriate metallic facilities are available.

Telegraph Special Access services TG1 and TG2 may be available.

— TG1 service provides transmission of asynchronous transitions between two current levels at rates up to 75 baud between an end user and the ESP's point of termination. This service may be furnished for half-duplex or duplex operation in a two-point or multipoint configuration. Neither direct current (DC) continuity of this service nor the capability to continuously transport varying alternating current (AC) is assured.

— TG2 service provides transmission of asynchronous transitions between two current levels at rates up to 150 baud between an end user and the ESP's point of termination. This service may be furnished for half-duplex or duplex operation in a two-point or multipoint configuration. Neither DC continuity of this service nor the capability to continuously transport varying AC is assured.

Telegraph services TG1 and TG2 may have active or passive multipoint-bridging, the maximum number of bridges to be determined by service application design limitations.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type B - Dedicated Telegraph BSA	BA - Dedicated Telegraph NX - Dedicated - Telegraph Grade PB - Telegraph Grade Service USW - Analog PLS - LSDS

Dedicated – Private Line – BSA
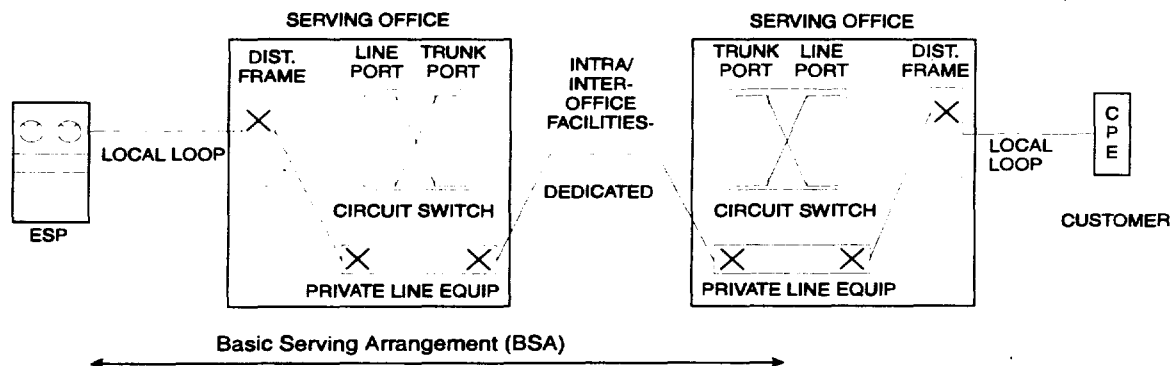
Basic Serving Arrangement (BSA)

UPDATED 7/31/98

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some of all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: half duplex or full duplex operation in a two-point or multipoint configuration.

Signaling

Telegraph dedicated serving arrangements are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical interface with the LEC for metallic services is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. The NCI codes for the desired service must be specified by the customer when ordering telegraph grade services. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

Reference

- TR-NPL-000336 Metallic and Telegraph Grade Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987

3.3   Category 3, Type C - Dedicated Voice Grade BSA (1017)

Service Description

The dedicated voice grade BSA provides an ESP with a dedicated connection through the network to the ESP's client. This BSA is capable of supporting the transmission of analog signals within an approximate bandwidth of 300 - 3000 Hz. The transmission interface may be 2-wire or 4-wire. Voice grade services are provided between service provider designated premises through serving wire centers or between a service provider designated premises and a telephone company hub. It is capable of providing various supervisory signaling alternatives.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type C - Dedicated Voice Grade BSA	AM - Direct Analog
	BA - Dedicated Voice-Grade
	BS - Dedicated - Private Line
	NX - Dedicated - Voice Grade
	PB - Voice Grade Service
	SWB - Special Access - Voice Grade
	USW - Analog PLS - VGS

Dedicated – Private Line – BSA
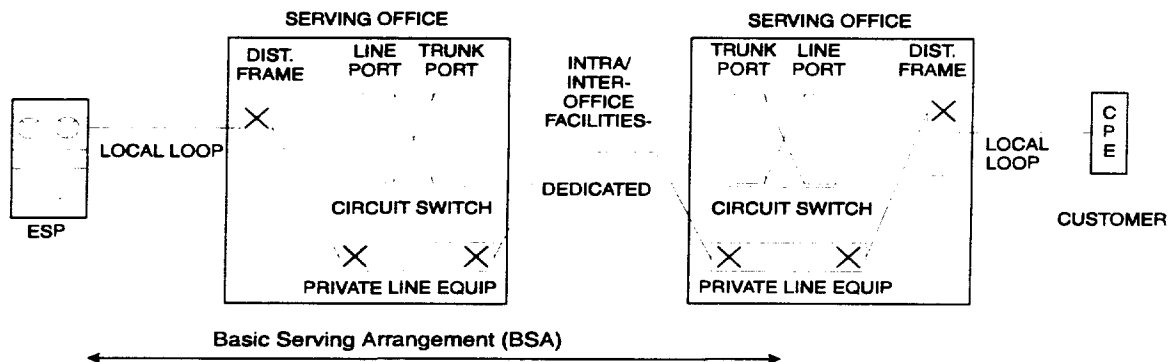
Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: transfer arrangement, improved termination, data capability, telephoto capability, and signaling capabilities.

Signaling

Signaling capability provides for the process by which one customer premises alerts another customer premises on the same service with which it wishes to communicate. These signals are the means by which the end user initiates a request for service, holds a connection or releases a connection. Examples of signaling arrangements are: loop-start, ground-start, E&M, and reverse-battery.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- TR-NWT-000335 Voice Grade Special Access Services - Transmission Parameter Limits and Interface Combinations, Issue 3, May 1993

- TR-TSY-000965 IntraLATA Voice Grade Private Line Services Transmission Parameter Limits and Interface Combinations, Issue 1 - October 1989, Revision 1 - December 1989, Issue 2 - December 1991

- GR-342-CORE High-Capacity Digital Special Access Service - Transmission Parameter Limits and Interface Combinations. Issue 1, December 1995 (replaces TR-INS-000342)

3.4   Category 3, Type D - Dedicated Program Audio BSA (1018)

Service Description

The dedicated program audio BSA provides an ESP with a one-way non-switched channel to the ESP's client that can pass an analog signal up to 15000 Hz. This serving arrangement is usually provided for transmission of music, but it is capable of voice and data within the band pass limits. Nominal frequency bandwidths for this serving arrangement are: 50 to 15000 Hz, 200 to 3500 Hz, 100 to 5000 Hz, 300 to 2500 Hz, or 50 to 8000 Hz.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type D - Dedicated Program Audio BSA	AM - Dedicated Program Audio
	BA - Dedicated Program Audio
	BS - Dedicated Program Audio
	NX - Dedicated - Program Audio
	PB - Program Audio Service
	SWB - Special Access - Program Audio
	USW - Analog PLS - AS

Dedicated – Private Line – BSA
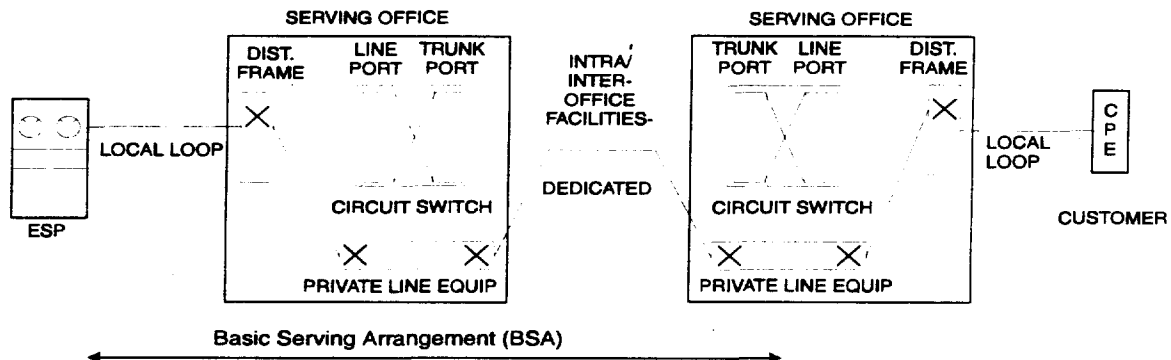
Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: stereo and gain conditioning.

Signaling

Program Audio services are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance

characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-337 Program Audio Special Access and Local Channel Services, Issue 1, December 1995 (replaces TR-NPL-000337, Issue 1)

- TR-TSY-000431 15 kHz Digital Audio Terminal for Program or Television Requirements and Objectives, Issue 1, October 1987

- GR-342 High-Capacity Digital Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-INS-000342, Issue 1)

- TR-NPL-000339 Wideband Analog Special Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987

3.5 Category 3, Type E - Dedicated Video BSA (1019)

<u>Serivce Description</u>

The dedicated video BSA provides an ESP with a dedicated, broadband communications channel to the ESP's client. Applications may include (but are not limited to): full-time and part-time commercial broadcast quality television, noncommercial broadcast quality television, video teleconferencing, distance-learning applications, surveillance, closed-circuit television. The channel is capable of transmitting a standard 525 line/60 field monochrome or National Television Systems Committee (NTSC) color video signal and associated audio signals. The associated audio signal(s) may be either duplexed or provided as separate channels. Video services are provided between customer designated premises through Serving Wire Center(s) or between a customer designated premises and a telephone company hub.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type E - Dedicated Video BSA	AM - Dedicated Video
	BA - Dedicated Video Service
	BS - Dedicated Video
	NX - Dedicated - Video
	PB - Video Service
	SWB - Special Access - Video
	USW - Analog PLS - VS

Dedicated – Private Line – BSA
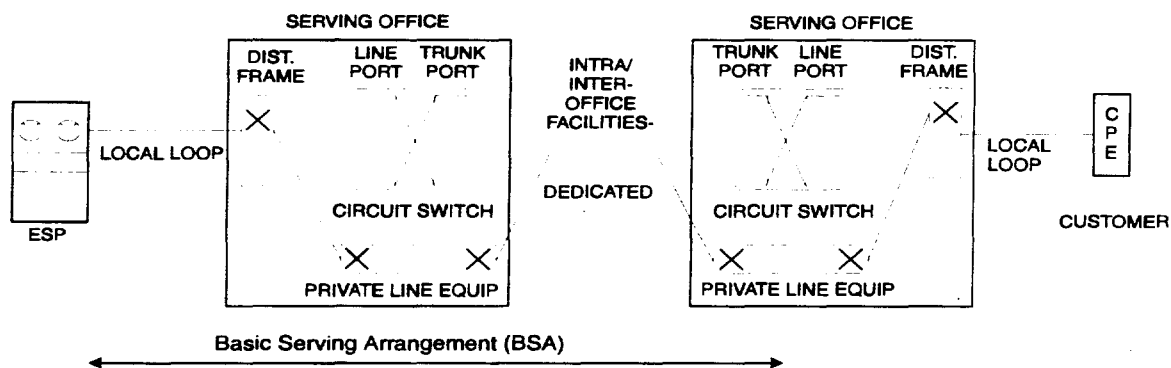
Basic Serving Arrangement (BSA)

<u>Alternatives</u>

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: 5 or 15 Hz audio channels, duplexed or separate channel audio signals, and video/audio delay difference.

Signaling

Video services are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes define the bandwidth and the provision of the audio signal(s) associated with a broadcast video channel. NCI codes are: (1) Total Conductors, (2) Protocol, (3) Impedance, (4) Protocol Options, and (5) Transmission Level Point (ignored for Television Special Access).

References

- GR-338 Television Special Access and Local Channel Services - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-TSV-000338, Issue 2)

- TR-TSY-000431 15 kHz Digital Audio Terminal for Program or Television Requirements and Objectives, Issue 1, October 1987

- U S WEST Publication 77326 U S WEST Fiber Optic Commercial Video Services, Issue D, December 1994

3.6 Category 3, Type F - Dedicated Digital (< 64 kbps) BSA (1020)

Service Description

The dedicated digital (< 64 kbps) BSA provides an ESP with a 4-wire digital channel to the ESP's client This serving arrangement provides for digital transmission of synchronous serial data at primary rates of 2.4, 4.8, 9.6, 19.2, or 56 kbps, plus associated secondary channel rates of 2.4, 4.8, 9.6, 19.2, or 56 kbps. Error Detection/Correction is an inherent part of this BSA.

Digital Data special access services are nonswitched channels that provide the capability to transmit digital data between two end user points of termination or and end user point of termination and a service provider point of termination.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type F - Dedicated Digital (< 64 kbps) BSA	AM - Ameritech Base Rate Services
	BA - Digital Data Service
	BS - SynchroNet® /DDS
	NX - Dedicated - Digital Data
	PB - Digital Data Service, Private Line Services
	SWB - Special Access - MegaLink^{SM} Data
	USW - Digital Data Service

Dedicated – Private Line – BSA
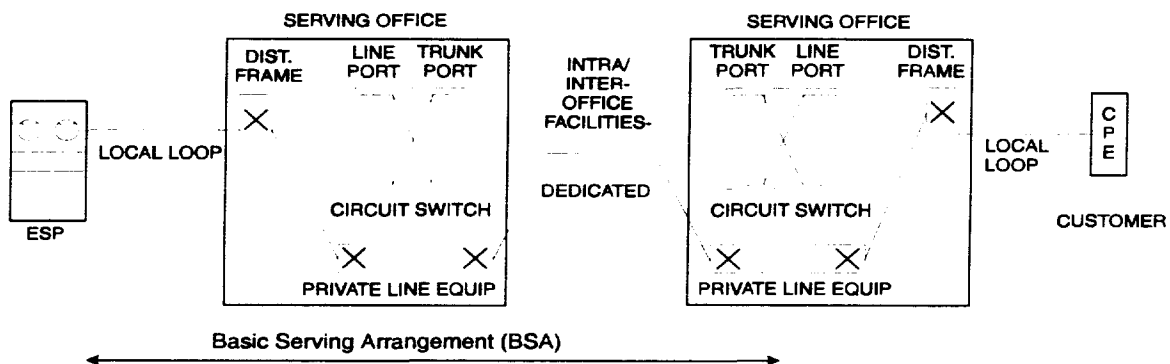
Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Transfer Arrangement.

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Signaling Arrangements

These services are available full-time and therefore supervisory signaling arrangements are not applicable. The signaling service is synchronous with timing provided through the LEC's facilities to the end user on the received bit stream. Individual calls are not set up and taken down.

Transmission Capabilities

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- TR-NWT-000341 Digital Data Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 2, February 1993

- U S WEST document 77312 U S WEST Digital Data Service, Technical Description, Issue D, October 1994

<u>Signaling Arrangements</u>

These services are available full-time and therefore supervisory signaling arrangements are not applicable. The signaling service is synchronous with timing provided through the LEC's facilities to the end user on the received bit stream. Individual calls are not set up and taken down.

<u>Transmission Capabilities</u>

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

<u>Network Interfaces</u>

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

<u>References</u>

- TR-NWT-000341 Digital Data Special Access Service Transmission Parameter Limits and Interface Combinations, Issue 2, February 1993

- U S WEST document 77312 U S WEST Digital Data Service, Technical Description, Issue D, October 1994

3.7   Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA (1021)

<u>Service Description</u>

The dedicated high capacity digital (1.544 Mbps) BSA provides an ESP with a dedicated channel. High Capacity Digital service is defined as a service that provides two-point, private-line, full duplex transmission at 1.544 Mbps isochronous serial data with a payload of 1.536 Mbps between an end user and an end user or between an end user and a LEC central office.

In some cases, this BSA can be provisioned for dedicated transport of Extended Superframe Format (ESF) datachannel capability.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type G - Dedicated High Capacity Digital (1.544 Mbps) BSA	AM - Ameritech DS1 Services BA - High Capacity Digital Service BS - MegaLink® /HiCap NX - Dedicated Digital - 1.544 Mbps PB - High Capacity Services (1.544 Mbps) SWB - Special Access - High Capacity (1.544 Mbps) USW - DS1 Service
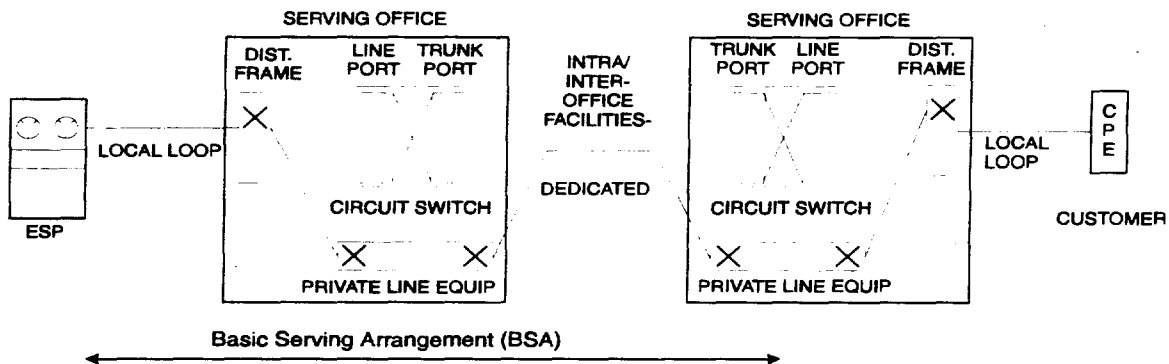
Dedicated — Private Line — BSA

Basic Serving Arrangement (BSA)

<u>Alternatives</u>

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette

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for the reference information where LEC defined alternatives may be found. An example of a potential alternative may be: transfer arrangement.

Signaling

The signaling service is isochronous with timing provided through the LEC's facilities to the end user on the received bit stream. Individual calls are not set up and taken down.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-342 High-Capacity Digital Special Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-INS-000342, Issue 1)

- GR-54 DS1 High Capacity Digital Service End User Metallic Interface Specifications, Issue 1, December 1995 (replaces TR-NPL-000054, Issue 1)

- TR-TSY-000312 Functional Criteria for the DS1 Interface Connector, Issue 1, February 1988

- Ameritech document AM-TR-OAT-000033, DS1 Customer Installation: Metallic Interface, Issue B, January 1990

- Pacific Telesis technical reference PUB L-780021-PB/NB Requirements and Objectives for Network Interface Unit and Mounting, Issue 2, November 1994

- U S WEST engineering publication 77327 Digicom® III High Capacity Digital Access Service "Joint Designed" Network Channel Interface, December 1988

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3.8   Category 3, Type H - Dedicated High Capacity Digital (>1.544 Mbps) BSA (1022)

Service Description

The dedicated high capacity digital (>1.544 Mbps) BSA provides an ESP with a dedicated channel to the ESP's client via a digital facility. High Capacity Digital service is defined as a service that provides two-point, private-line, transmission at speeds above 1.544 Mbps between an end user and an end user or between an end user and a LEC central office. Individual calls are not set up and taken down. The ESP must specify the desired transmission speed as an alternative with this BSA.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type H - Dedicated High Capacity Digital (>1.544 Mbps) BSA	AM - Ameritech DS3 Services BA - High Capacity/Lightwave Service BS - LightGate®/HiCap NX - Dedicated - Digital - 45 Mbps PB - High Capacity Services (>1.544 Mbps) SWB - Special Access - High Capacity MegaLink^{SM} Custom USW - DS3 Service

Dedicated — Private Line — BSA
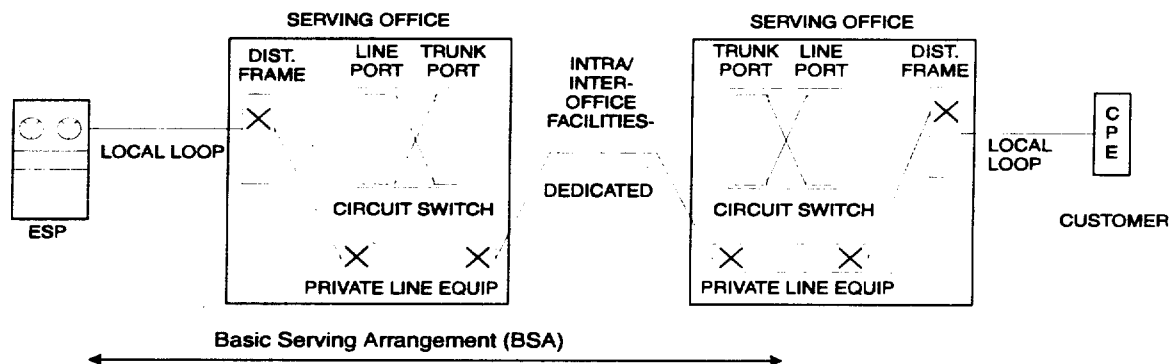
Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: transmission speed and transfer arrangement.

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SM MegaLink is a service mark for Southwestern Bell Telephone.

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Signaling

The signaling service is isochronous with timing provided through the LEC's facilities to the end user on the received bit stream. Individual calls are not set up and taken down.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- GR-342 High-Capacity Digital Special Access Service - Transmission Parameter Limits and Interface Combinations, Issue 1, December 1995 (replaces TR-INS-000342, Issue 1)

- U S WEST engineering publication 77327 Digicom® III High Capacity Digital Access Service "Joint Designed" Network Channel Interface, December 1988

- U S WEST publication 77324 U S WEST DS3 Service, Issue C, April 1993.

® Digicom is a registered trademark of U S WEST Communications, Inc.

3.9   Category 3, Type I - Dedicated Alert Transport BSA (1023)

<u>Service Description</u>

The dedicated alert transport BSA using derived local channel technology and a LEC provided scanner offers ESPs a 24 hour supervised monitoring capability using compatible local loop access lines.

The scanner continuously monitors the status of all clients. A host processor monitors all scanners and, in response to a change in status, will identify the subscriber from which the alert condition originates and notify the appropriate ESP.

This serving arrangement utilizes derived channels which comply with Underwriter's Laboratories (UL) AA and National Fire Protection A and National Fire Protection Association (NFPA) requirements.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type I - Dedicated Alert Transport BSA	BA - REACT^{SM} BS - WATCHALERT$^{®}$ NX - PULSENET^{SM} Alert Transport Service PB - POLLSTAR^{SM} DLC Security Transport

Dedicated – Private Line – BSA
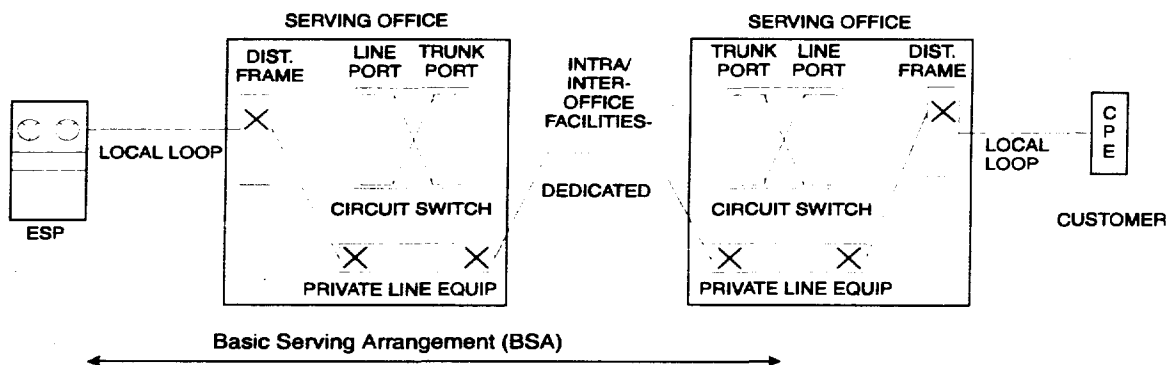
Basic Serving Arrangement (BSA)

<u>Alternatives</u>

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found.

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[®] WATCHALERT is a registered service mark of BellSouth Corporation.

[SM] PULSENET is a service mark of NYNEX.

[SM] POLLSTAR is a service mark of Pacific Bell.

UPDATED 7/31/98

Signaling

Dedicated serving arrangements are available full-time and therefore supervisory signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. The NCI codes for the desired service must be specified by the customer when ordering metallic services. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

Reference

- BellSouth Publication TR-73530 Description of the Network Interface at an Alarm Agency to WATCHALERT® Service. Issue A. June 1989

® WATCHALERT is a registered service mark of BellSouth Corporation.

3.10 Category 3, Type J - Dedicated Derived Channel BSA (1024)

Service Description

The dedicated derived channel BSA provides one or more low-speed dedicated data channels (e.g. 9.6 kbps) derived on a dial tone line in addition to the voice channel. The customer is provided with a multiplexed interface requiring the use of a data-voice multiplexer (DVM) on the customer's premises. A matching DVM in the central office splits off the data channel(s) from the voice path before the voice path enters the circuit switch.

Several options may be available for extending the derived data channel to the ESP, including a low-speed private line, a multiplexing arrangement whereby several derived channels are transmitted on a higher speed private line, or a data voice multiplexer similar to the equipment employed on the end user's access link resulting in "back-to-back" derived channels.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type J - Dedicated Derived Channel BSA	BA - Dedicated Derived Channel BS - Derived Data Channel Service NX - DOVPATH® Transport Service SWB - DovLink^{SM} USW - Simultaneous Voice and Data Service

Dedicated – Private Line – BSA
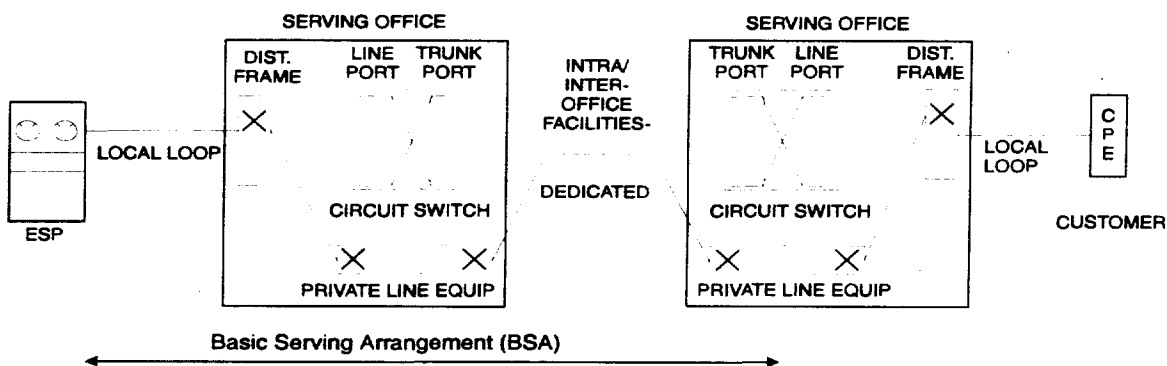
Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found.

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SM DovLink is a service mark of Southwestern Bell Telephone Company.

Signaling

Dedicated serving arrangements are available full-time and therefore signaling arrangements are not applicable.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. The NCI codes for the desired service must be specified by the customer when ordering metallic services. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

Reference

- SR-NPL-000665 Network Interface Specification: DOV/DVM Type 1, Issue 1, January 1987

3.11 Category 3, Type K - Dedicated Digital (64 Kbps) BSA (1037)

<u>Service Description</u>

Dedicated Digital (64 Kbps) Service will provide a channel for duplex four-wire transmission of synchronous serial data at 64 Kbps. The channel provides a synchronous service with timing provided by the telephone company. The 64 Kbps channel will be provided between two customer designated premises or between a customer designated premise and a telephone company serving wire center.

Generic Name of BSA	Regional Company BSA Name
Category 3, Type K - Dedicated Digital (64 Kbps) BSA	AM - Ameritech Base Rate Service
	BA - Digital Data Service 64 KBS
	BS - DS-0 Transport Facilities
	NX - (see NYNEX note)*
	USW - Digital Data Service - 64 Kbps

Dedicated – Private Line – BSA
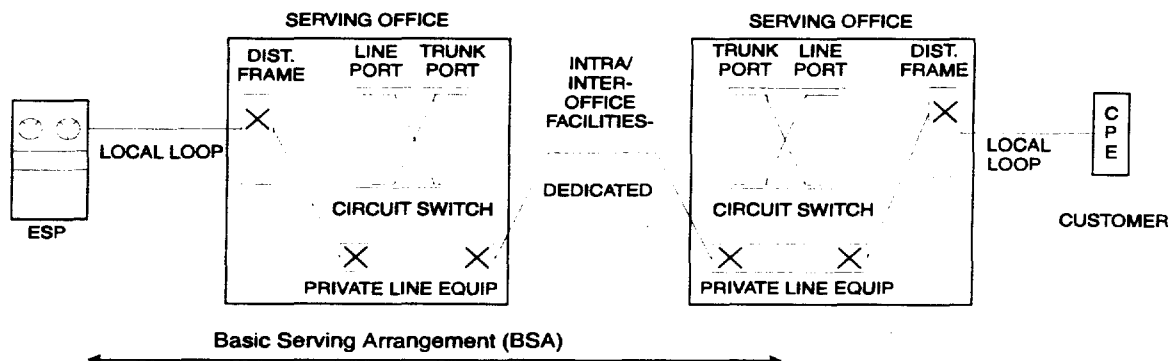
Basic Serving Arrangement (BSA)

<u>Alternatives</u>

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found. Examples of potential alternatives may be: Transfer Arrangement.

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Note: NYNEX offers 64 Kbps service associated with the Dedicated High Capacity Digital (1.544 Mbps) BSA.

Signaling Arrangements

These services are available full-time and therefore supervisory signaling arrangements are not applicable. The signaling service is synchronous with timing provided through the LEC's facilities to the end user on the received bit stream. Individual calls are not set up and taken down.

Transmission Capabilities

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options. The NCI codes for the service desired must be specified by the customer when ordering. Only certain code combinations are compatible, as listed in TR-NWT-000341.

References

- TR-NWT-000341 Digital Data Special Access Service - Transmission Parameter Limits and Interface Combinations. Issue 2, February 1993.

- Ameritech Technical Reference TR-OAT-00070 Issued October 1990, Ameritech OPTINET 64 Interface Specifications, Issue 1, September 1990.

- BellSouth Technical Reference TR 73545 SynchroNet Service Network Interface Specifications, Issue D September 1994.

4. Category 4 - Dedicated Network Access Link BSA (1025)

Service Description

The dedicated network access link (DNAL) BSA provides a dedicated data channel between the ESP's termination and a designated central office which contains the specific features required by the ESP. The DNAL is used to transmit network information or network control information from the ESP to the network (e.g., activate a message waiting indicator), or to deliver network information or network control information from the network to the ESP (e.g. calling number identification over a message desk interface). The type of DNAL BSA used will determine the bandwidth alternatives and capabilities available to the ESP.

The DNAL BSA can support one-way or two-way transmission depending on the alternatives used.

Route diversity may be available with this serving arrangement.

Generic Name of BSA	Regional Company BSA Name
Category 4 - Dedicated Network Access Link BSA	AM - Dedicated Network Access Link
	AM - Type A-Signal Transfer Point Access (STP) (2011)
	AM - Type B-Circuit Switch Facility Control (CSFC) (2012)
	AM - Type C-Simplified Message Desk Interface (SMDI) (2013)
	AM - Type D-Simplified Message Desk Interface-Expanded (SMDI-E) (2014)
	AM - Type E-Ameritech Reconfiguration Service (2015)
	AM - Type F-Alarm Service (2016)
	AM - Type G-Ameritech Switch to Computer Applications (ASCAI) (2017)
	BA - Dedicated Network Access Link
	BS - Private Line/Special Access
	NX - (see NYNEX note)*
	PB - Dedicated Network Access Link
	SWB - Special Access - Metallic
	SWB - Special Access - Voice Grade
	SWB - Switched Access Dedicated Network Access Link
	USW - Analog PLS

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* Note: NYNEX offers dedicated channels for specific network information or network control information as part of the appropriate BSA or BSE that provides the specific capability.

Category 4 – Dedicated Network Access Link – BSA
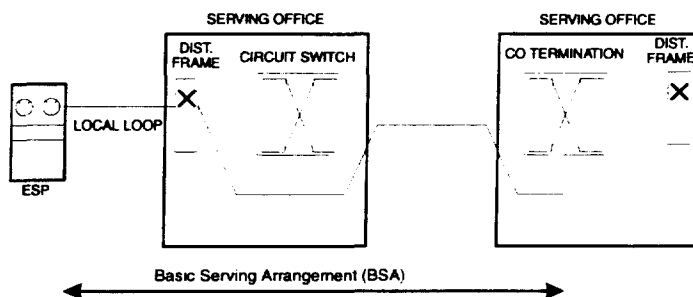
Basic Serving Arrangement (BSA)

Alternatives

An alternative is an item that must be selected for the BSA to be technically meaningful. Alternative items may be available from some or all of the Local Exchange Carriers (LECs). Refer to the individual LEC tariff reference diskette for the reference information where LEC defined alternatives may be found.

Signaling

Signaling capability provides for the process by which one customer premises alerts another customer premises on the same service with which it wishes to communicate. These signals are the means by which the end user initiates a request for service, holds a connection or releases a connection.

Transmission

The subject of transmission covers a broad range of performance considerations related to the physical facilities that compose network architecture. Transmission parameters are designed to provide objective transmission performance characteristics, as perceived by the end user and LEC, between the points of termination. Transmission parameters are defined for each Network Interface (see below) supporting this BSA. These parameters are defined in the reference documentation.

Network Interfaces

The electrical and physical interface with the LEC is described by a Network Channel Interface (NCI) code for each end user termination and each service provider termination. NCI codes are provided to aid the user in understanding the relationship of the network interface to the electrical or optical characteristics of the interface. NCI codes have four basic components: (1) number of conductors (wire or fibers), (2) protocol code, (3) nominal reference impedance code, and (4) any applicable protocol options.

References

- TR-NWT-000335 Voice Grade Special Access Service - Transmission Parameter Limits and Interface Combinations, Issue 3, May 1993 (Component of TR-TSY-000333)

- TR-NPL-000336 Metallic and Telegraph Grade Special Access Services - Transmission Parameter Limits and Interface Combinations, Issue 1, October 1987 (Component of TR-TSY-000333)

BSE and CNS Descriptions

The following section contains descriptions of BSEs and CNSs. They are arranged alphabetically by generic name in the appropriate BSA categories. The BSA categories are:

1. Circuit Switched

2. Packet Switched

3. Dedicated

4. Dedicated Network Access Link

1. Technical Descriptions for Circuit Switched Serving Arrangements

Alternate Routing (1041)

When all the circuits in an ESP's circuit switched trunk serving arrangement with alternate routing capability are busy due to traffic volume the network will attempt to complete subsequent calls to an alternate route served by that switch as previously specified by the ESP.

Generic Name of ONA Service	Product Name	BSE or CNS
Alternate Routing	AM - Alternate Routing	BSA*
	BA - Alternate Traffic Routing	BSE
	BS - Alternate Routing	BSE or CNS
	NX - Alternate Routing	BSE
	PB - Alternate Traffic Routing	BSA *
	SWB - Alternate Traffic Routing	BSE
	USW - Alternate Traffic Routing	BSE

FEATURE OPERATION:

Alternate routing allows different routes to overflow in different ways, even though they share the same physical trunk or circuit set. Alternate routing should always be specifiable without reference to calling line or called trunk, circuit, or line set.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS™	5ESS®	DMS-100®
Earliest Generic Release	1AE8A	5E2(2)	BCS17

2. The routing and charging function consists of interpreting the dialed digits, directing the connection to a trunk or circuit, directing the transmission of call setup data to the distant end, and determining what charge treatment to

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* For Ameritech and Pacific Bell, this is a Circuit Switched BSA Trunk Type feature

ESS is a trademark and 5ESS is a registered trademark of AT&T.

DMS is a registered trademark of Northern Telecom.

use. This process uses information associated with the calling line, dialed digit information, and route availability data. Existing stored program controlled systems translate the dialed digit combination into classes of dialed digit combinations. These classes, along with the calling line associated indicator, are translated into a charge index and a primary route index. The primary route index defines the call setup data to be transmitted, a set of trunks, circuits, and an alternate route index to be used if the initial set of trunks or circuits are unavailable.

3. The 1A ESS machine provides for the ability to have 16 Route Indexes on Route Transfer Keys (16 keys). Through the operation of these keys it is possible to transfer outgoing traffic from one trunk group to another trunk group. It is also possible to split a particular trunk group in order to control the traffic offered to a specific quantity of trunks instead of offering all traffic to all of the trunks. The actual transfer key may be either located in the 1A ESS office or located on the ESP's premises.

4. In the 5ESS, one primary route and up to four alternate routes may be specified. These routes are assigned at the establishment of initial service. The alternate routes are fixed and cannot be enabled via a key operation.

5. The DMS-100 has several methods to provide alternate routing. The software methods used are similar to the 5ESS, in that the alternate routes are fixed and do not have the potential to be controlled manually as in the 1A ESS. The type of alternate routing method to use depends on the type of trunks used for this feature. Standard trunking can have up to eight alternate routes.

6. In some regional companies, this service may be limited to trunk side access utilizing Feature Groups B and D protocol, Feature Group D protocol only, trunk side BSA - 950 option, trunk side BSA - 10XXX (and/or 101XXXX) option, or trunk side BSA 950 option and 10XXX (and/or 101XXXX) option.

7. References:

   • LSSGR FR-64 (formerly FR-NWT-000064), Call Processing Section 5, Issue 1, December 1997, GR-505 (replaces TR-TSY-000505).

This service, if offered as a BSE, is associated with the Circuit Switched Trunk basic serving arrangement.

Answer Supervision With A Line Side Interface (1042)

Answer Supervision is an electrical signal passed back to the calling end of a switched telephone connection indicating that the called line has gone off hook. This signal can be used by terminal equipment (PBX, pay telephone, call diverter, etc.) connected to the calling line to determine that the call has entered the talking state and that charging may commence. Previously this signal was available on trunks, not on lines.

The Answer Supervision signal consists of a reversal of the telephone line bias voltage, the ring normally being more negative than the tip. At the time of answer or shortly thereafter, tip and ring are interchanged by the switching machine, so that the tip is now more negative than the ring. This reversal persists at least until the called line goes on hook, and possibly until the calling line goes on hook. All of the other electrical characteristics of a line equipped for answer supervision are identical to those of a normal line.

Generic Name of ONA Service	Product Name	BSE or CNS
Answer Supervision With A Line Side Interface	AM - Answer Supervision With Line Side Interface	BSE
	BA - Answer Supervision with a Line Side Interface	BSE
	BS - Answer Supervision	BSE
	PB - Answer Supervision (Line Side)	BSE
	USW - Answer Supervision (Line Side)	BSE

FEATURE OPERATION:

Answer Supervision is a service most useful to a "device" like a PBX or "smart" pay telephone. (This does not preclude its use on a line directly connected to a telephone set, although the battery reversal may make the set's DTMF pad inoperative during the talking state of the call.)

1. The "device" (PBX, pay telephone, etc.) goes off-hook and dials a call in the normal way.

2. After dialing is completed, the call is switched through the network over the usual array of network components, which may include tandem trunks, tandem switches, Interexchange Carriers, and finally, a terminating local switch.

3. When the called party answers, the terminating office changes the supervisory state of the incoming trunk to off-hook from on-hook.

4. This state change is passed back toward the originating local office by each intervening office and trunk.

5. The originating local office uses this state change to note the time of answer for billing purposes. It also causes the line circuit of the line (equipped for Answer Supervision) to reverse the polarity of the battery feed toward the "device" that placed the call.

6. When the called party hangs up, the state change, off-hook to on-hook, is transmitted back to the originating local office. Depending on its software realization of the feature, the originating local switch may or may not pass this signal to the "device" by changing the battery polarity back to normal. In either case the originating local switch begins "calling party hold" timing on the originating line.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	5ESS	DMS-100
Earliest Generic Release	5E8	BCS24

This feature may be available on the 1A ESS switch with custom hardware and software.

2. Answer Supervision requires a special line card in the DMS-100.

3. Battery reversal may lag actual answer by upwards of 2 seconds. This is a function of accumulation of network elements processor time (delay) in the path of the call connection.

4. Answer Supervision is not provided when calling certain types of non-billing lines.

5. Answer Supervision is not provided to connections to OSPS, TSPS or TOPS systems due to the billing for these type of calls being handled at the operator system and not at the local office. Answer Supervision is a function resulting for a local recording of the billing record.

6. Answer Supervision may be provided before actual answer when calling certain types of ACD systems.

7. Battery reversal signals are not passed by the carrier systems that are normally used for pair gain and for foreign exchange service. Answer Supervision is compatible with foreign exchange service provided over physical cable facilities.

8. Many dial long line circuits, digital loop carrier systems or non-metallic line side facilities do not pass battery supervision.

9. This service is intended to be used by compatible terminal equipment. Many DTMF telephones are polarity sensitive and do not dial when the line voltage is reversed.

10. References:

   - GR-506 LSSGR: Signaling for Analog Interfaces (A module of LSSGR, FR-64) Issue 1, June 1996, Rev. 1, November 1996 (replaces TR-TSY-000506, Issue 3)

   - SR-2275, Bellcore Notes on the Networks, Issue 3, December 1997 (replaces SR-TSV-002275, Issue 2)

   - GR-334-CORE, Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994 (replaces TR-NWT-000334, Issue 3)

   - TR-NWT-000335, Voice Grade Special Access Service - Transmission Parameter Limits & Interface Combinations, Issue 3, May 1993

   - Ameritech Answer Supervision With Line Side Interface Specifications, AM-TR-MKT-000071, Issue 1, December 1990

This service is associated with the Circuit Switched Line basic serving arrangement.

Automatic Callback (1043)

Automatic Callback (CLASS^{SM}) feature is an *outgoing* call management feature that allows the customer to automatically place a call to the last number called. It does not matter whether the last number called was busy or idle, answered or unanswered. If the called line is busy, the called line will be checked periodically and the customer will be notified by a special ring when the called line becomes idle. The customer can use the phone for incoming and outgoing calls while waiting for the special ringback. This capability requires that both the originating and terminating central offices be equipped with Common Channel Signaling (CCS) SS7 and be interconnected by SS7.

Generic Name of ONA Service	Product Name	BSE or CNS
Automatic Callback	AM - Repeat Dialing	CNS
	BA - Repeat Call	CNS
	BS - Repeat Dialing	CNS
	NX - Repeat Dialing	CNS
	PB - Repeat Dialing	CNS or BSE
	SWB - Call Cue$^{®}$	CNS
	USW - Continuous Redial	CNS

FEATURE OPERATION

The customer must contact the telephone company to initiate Automatic Callback service. A service order is required. Once the appropriate translations have been made to the customer's line, the customer may activate the service by using the service access code *66 (1166 for rotary dial), and may deactivate the service, to cancel any outstanding Automatic Callback requests, by using *86 (1186 for rotary dial).

Upon activation of Automatic Callback the called line is checked for busy/idle status and class of service. If the called line is idle and the class of service is permissible, call setup is attempted. If the called line is busy, the customer receives an announcement stating the called line is busy and the line will be checked periodically for busy/idle status. When the line becomes free the customer will hear a special ring. Upon answering the special ring, one of the following happens:

1. Call setup is attempted, the customer hears audible ringing while the called party receives power ringing. Or

2. The customer receives an announcement indicating the following:

   — 1A ESS & 5ESS: The called line has become busy again, hang up and try your call again. (This terminates Automatic Callback for this activation.) The customer can reactivate Automatic Callback by again using the service access code.

   — DMS-100: The called line has become busy again, monitoring of the line will resume, hang up and wait for the special ringback.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

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^{SM} CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

$^{®}$ Call Cue is a registered service mark of Southwestern Bell Telephone Company.
UPDATED 7/31/98

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10*	5E5	BCS28

Note: * Available on intraoffice basis with generic 1AE9.

2. The serving central office switch must be equipped with the appropriate CLASS^{SM} Automatic Callback software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS and Common Channel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7. This service is only offered on an intraLATA basis at this time.

3. This service is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DID). This service is also unavailable to customers that have denied originating treatment and multiline hunt groups that cannot have ringback directed to the calling station. In addition, because of the special ringing, this service may not work where channel banks (FX service), MFTs or bridge lifters are used (depending on circuit design).

4. The special ringing that the customer hears when call setup is being attempted consists of 2 short rings and 1 long ring in 6 seconds. Some telephone companies use this pattern for more than one service.

5. There are some digital loop carrier plug-ins that will not transmit the required special ringing.

6. The customer can have multiple Automatic Callback activations in effect concurrently.

7. Automatic Callback cannot be activated towards a line that has Call Forwarding Variable or Selective Call Forwarding activated. If the service cannot be activated, the caller is routed to a denial announcement or tone.

8. In some electronic key sets, power ringing generates a preset ringing pattern regardless of the ringing pattern generated by the originating central office. Therefore customers with these electronic sets may not be able to differentiate regular ringing for incoming calls from the special ringing for Automatic Callback.

9. The length of time the called line is monitored for busy/idle status is a telephone company settable parameter ranging from 16-45 minutes. The interval is set on a per switch basis and is generally the same throughout a regional company.

10. The customer can use the telephone for incoming and outgoing calls while waiting for the special ringback. However, the special ringback will not be attempted while the customer is using the telephone.

11. References:

   • TR-NWT-000215 CLASS^{SM} Feature: Automatic Callback (A Module of LSSGR, FR-64 [formerly FR-NWT-000064]), Issue 3, June 1993.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

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^{SM} CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)
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Automatic Recall (1044)

Automatic Recall (CLASS^{SM}) is an incoming call management feature that allows the customer to automatically call back the last incoming number without having to know the number that called. If the called line is busy, the called line will be checked periodically and the customer will be notified by a special ring when the called line becomes idle. This capability requires that both the originating and terminating central offices be equipped with Common Channel Signaling (CCS) SS7 and be interconnected by SS7.

Generic Name of ONA Service	Product Name	BSE or CNS
Automatic Recall	AM - Automatic Callback	CNS
	BA - Return Call	CNS
	BS - Call Return	CNS
	NX - Call Return	CNS
	PB - Call Return	CNS
	SWB - Call Return ^{SM}	CNS
	USW - Last Call Return	CNS

FEATURE OPERATION:

The customer must contact the telephone company to initiate Automatic Recall service. A service order is required. Once the appropriate translations have been made to the customer's line, the customer activates the service by dialing the service access code *69 (1169 for rotary dial), then depending on how the Local Exchange Company chooses to implement Automatic Recall, one of the following happens:

- One-Level Activation Procedure

    Upon activation using *69 (1169 for rotary dial), the called line is checked for busy/idle status and class of service. If the called line is idle and the class of service is permissible, call setup is attempted. If the called line is busy, the customer receives an announcement stating the called line is busy. The line will be checked periodically for busy/idle status and when the line becomes idle the customer will hear a special ring. Upon answering the special ring, one of the following happens:

1. Call setup is attempted, the customer hears audible ringing while the called party receives power ringing. Or

2. The customer receives an announcement indicating the following:

    1A ESS & 5ESS: The called line has become busy again, hang up and try your call again. (This terminates Automatic Recall for this activation.) The customer can reactivate Automatic Recall by again using the service access code.

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^{SM} CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

^{SM} Call Return is a service mark of Southwestern Bell Telephone Company.

DMS-100: The called line has become busy again, monitoring of the line will resume, hang up and wait for the special ringback.

- Two-Level Activation Procedure:

Upon activation using *69 (1169 for rotary dial), an announcement is provided informing the customer that Automatic Recall has been accessed. If the incoming number is valid, the number, date and time of the call is voiced back to the customer. (If the number is marked private then a private indication is voiced back to the customer instead of the number.) The customer is then instructed to dial "1" to activate Automatic Recall or hang up to abort the request. If the customer dials "1", the service proceeds as described above under the One-Level Activation Procedure.

To cancel all outstanding Automatic Recall requests, the customer may deactivate the service by using *89 (1189 for rotary dial).

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10*	5E5	BCS28

Note: * Available on intraoffice basis with generic 1AE9.

2. The serving central office switch must be equipped with the appropriate CLASS^{SM} Automatic Recall software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS and Common Channel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7. This service is only offered on an intraLATA basis at this time.

3. This service is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DID). This service is also unavailable to customers that have denied originating and denied terminating treatment and multiline hunt groups that cannot have ringback directed to the calling station. In addition, because of the special ringing, this service may not work where channel banks (FX service), MFTs or bridge lifters are used (depending upon circuit design).

4. The special ringing that the customer hears when call setup is being attempted consists of 2 short rings and 1 long ring in 6 seconds. Some telephone companies use this pattern for more than one service.

5. There are some digital loop carrier plug-ins that will not transmit the required special ringing.

6. The customer can have multiple Automatic Recall activations in effect concurrently.

7. Automatic Recall cannot be activated towards a line that has Call Forwarding Variable or Selective Call Forwarding Activated. If the service cannot be activated, the caller is routed to a denial announcement or tone.

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^{SM} CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)
UPDATED 7/31/98

8. In some electronic key sets, power ringing generates a preset ringing pattern regardless of the ringing pattern generated by the originating central office. Therefore customers with these electronic sets may not be able to differentiate regular ringing for incoming calls from special ringing for Automatic Recall.

9. The length of time the called line is monitored for busy/idle status is a telephone company settable parameter ranging from 16-45 minutes. The interval is set on a per switch basis, and is generally the same throughout a regional company.

10. The customer can use the telephone for incoming and outgoing calls while waiting for the special ringback. However, the special ringback will not be attempted while the customer is using the telephone.

11. References:

   - TR-NWT-000227 CLASS[SM] Feature: Automatic Recall (A Module of LSSGR, FR-64 [formerly FR-NWT-000064]) Issue 3, June 1993.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

[SM] CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

Call Detail Recording Reports (1045)

The Call Detail Recording capability will provide the customer with a data record of all completed calls made to a designated telephone number. The call details will not be delivered in real time but as a paper printout or via magnetic tape on a weekly basis (or mutually agreed upon time interval).

Generic Name of ONA Service	Product Name	BSE or CNS
Call Detail Recording Reports	BA - Call Detail Recording Reports	BSE
	BS - Call Detail Information	BSE
	NX - Monthly Detailed Recording	AN
	SWB - Recording Service	AN
	USW - Access Service Billing Information	BSE

FEATURE OPERATION:

This service is the recording of the details of the customer messages and, when requested by the customer, the provision of those details to the customer. This service is ordered through the telephone company's appropriate tariffs or on an individual case basis.

When the capability is ordered the following detail will be provided: originating billing telephone number (ANI), terminating telephone number if dialed before carrier cut through (called number), connect time (time of day the call originated), elapsed time (duration of the call), date of the call. If the capability is ordered with the Voice Grade Circuit Switched BSA, the Carrier Identification Code (CIC) of the customer is also provided.

The Call Detail Report will be sorted in the following order:

> **Terminating Number**
>
> **Originating Number**
>
> **Date**
>
> **Time of Day**

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. Call Detail Recording capability will only record intraLATA calls.

2. The record format will be in the EMR/EMI standard format.

3. Recording is provided 24 hours per day seven days a week.

4. Telephone companies provide this service in their operating territory. This service may be provided on a state or end office basis. The information provided may vary by company.

5. Telephone companies can provide for the recording of all the customer's messages, provided that they are accessible by the telephone company's recording equipment. The recording equipment will be provided at locations selected by the telephone companies.

6. In some regional companies, this service may be limited to one, two or various combinations of Feature Group A protocol service, Feature Group B protocol service, or Feature Group D protocol service.

7. References:

   • GR-610-CORE, Message Detail Recording (MDR), Issue 1, November 1993, Revision 1 - December 1994, Revision 2 - June 1995.

   • TR-TSY-000615, Generic Requirements for Message Detail Recording (MDR) Access Interfaces, Issue 1, July 1990.

   • GR-1100, Bellcore Automatic Message Accounting Format (BAF) Requirements, Issue 2, December 1997, (replaces TR-NWT-001100, Issue 2)

This service, if offered as a BSE, is associated with the Circuit Switched Line and Trunk basic serving arrangements.

Call Forwarding - Busy Line Intraswitch (1046)

Call Forwarding Busy Line (CFBL) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is in a busy condition. The service is activated by a service order. A call forwarded due to a busy condition would always forward to the preprogrammed number (selected at the time of the service order). The called number and the redirected number must be in the same central office switch. The service is deactivated or the preprogrammed number is changed by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line Intraswitch	AM - Busy Line Transfer	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Busy Line	CNS
	NX - Call Forwarding 2	CNS
	PB - Call Forward Busy Line	CNS
	SWB - Call Forwarding Busy Line	CNS
	USW - Call Forwarding Busy Line	CNS
	USW - Call Forwarding Busy Line/Don't Answer	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward to" number is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS24

2. Multiline customers can have CFBL on each line if desired.

3. Calls may be forwarded to any telephone number, including DID numbers, served by the same central office that serves the base station.

4. Subscribers may have CFBL with Call Forwarding Don't Answer (CFDA), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFBL, CW will normally take precedence over the CFBL feature. However, if the station is made busy by a make-busy key arrangement, CW is not invoked and the CFBL feature takes precedence.

5. References:

   • Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-NWT-000504)

   • FSD 01-02-0801 Series Completion, Issue 1, May 1990, Module TR-TSY-000568.

   • TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Busy Line Interswitch (1047)

Call Forwarding Busy Line (CFBL) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is in a busy condition. The service is activated by a service order. A call forwarded due to a busy condition would always forward to the preprogrammed number (selected at the time of the service order). The called number and the redirected number may be in the same or in different central office switches. The service is deactivated or the preprogrammed number is changed by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line Interswitch	AM - Busy Line Transfer	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Busy Line	CNS
	NX - Call Forwarding 2	CNS
	PB - Busy Call Forwarding Extended	CNS
	SWB - Call Forwarding Busy Line	CNS
	USW - Call Forwarding Busy Line (Expanded)	CNS
	USW - Call Forwarding Busy Line/Don't Answer (Expanded)	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward to" number is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS24

* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFBL on each line if desired.

3. Calls may be forwarded to any telephone number, including DID numbers, served by the same or a different central office.

4. Subscribers may have CFBL with Call Forwarding Don't Answer (CFDA), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFBL, CW will normally take precedence over the CFBL feature. However, if the station is made busy by a make-busy key arrangement, CW is not invoked and the CFBL feature takes precedence.

5. References:

- Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-NWT-000504).

- FSD 01-02-0801 Series Completion, Issue 1, May 1990, Module TR-TSY-000568.

- TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation (1048)

This capability provides ESP's clients with the ability to activate the Call Forwarding Busy Line and Call Forwarding Don't Answer features by dialing an access code in the form of *XX. The ESP's client will be able to deactivate the Call Forwarding Busy Line and Call Forwarding Don't Answer features by dialing another access code, also in the form of *XX.

Limitations may apply, depending on the type of switching systems serving the client.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation	AM - Customer Control of Busy Line Transfer or Alternate Answering	CNS
	BS - Customer Control of CF BL/DA	CNS
	NX - CallAbility^{SM} Feature Access	CNS
	PB - Call Forwarding Busy Line/Don't Answer- Fixed	CNS
	USW - Call Forwarding BL, Customer Programmable	CNS
	USW - Call Forwarding DA, Customer Programmable	CNS

FEATURE OPERATION:

Customer control of Call Forwarding Busy Line/Don't Answer is a central office software capability that allows a subscriber to activate and deactivate Call Forwarding Busy Line (CFBL) and/or Call Forwarding Don't Answer (CFDA). Activation of these services allows the customer to have an incoming call redirected to a telephone number preset at the time the service was established by service order. The service is activated/deactivated by the subscriber dialing the assigned access code. Access codes are in the same format as those for Call Forwarding Variable (*XX). CFDA and CFBL may have different activation/deactivation codes. The party activating these services does not have to be in the same central office switch as the forwarded telephone number.

Also see the service called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number."

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS27

* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFBL/DA - Customer Control on each line if desired.

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^{SM} CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.

3. References:

- TR-TSY-000586, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1450, Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number (1049)

This capability provides the ESP's client with the ability to change the Forward-To number for Call Forwarding Busy Line by dialing an access code in the form of *XX, and to change the Forward-To number for Call Forwarding Don't Answer by dialing another access code, also in the form of *XX. Limitations may apply, depending on the type of switching system serving the client.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number	AM - Customer Control of Busy Line Transfer or Alternate Answering	CNS
	PB - Call Forwarding Busy Line/Don't Answer Programmable	CNS
	USW - Call Forwarding BL, Customer Programmable	CNS
	USW - Call Forwarding DA. Customer Programmable	CNS

FEATURE OPERATION:

This feature can be controlled (activated or deactivated) by the customer in two ways.

1. The customer dials an activation code and the remote DN or the deactivation code (i.e., Ameritech, Pacific Bell and U S WEST). The codes are in the same format as Call Forwarding Variable (*XX).

    Customer control of Call Forwarding Busy Line/Don't Answer is a central office software capability that allows a subscriber to have an incoming call redirected to another Directory Number (DN) if the number dialed (the subscriber's number) is in a busy condition or is not answered. The service is activated by the subscriber dialing an activation code, much in the same manner as Call Forwarding Variable, and entering the remote number that calls will be forwarded to. The called number and the redirected number do not have to be in the same switch. The service and forwarded-to number are deactivated by dialing the deactivation code.

2. The customer dials an access number (e.g., an 800 number or a regular NPA-NXX-XXXX number from any station (i.e., NYNEX). An announcement is returned asking for the customer directory number and a security code. If the dialed directory number and security code match and the customer subscribes to CFBL, a prompt to select the feature (e.g., CFBL/DA) and the specific action (e.g., activation or deactivation) is returned. After making his change the customer can wait for a confirmation or use, at any time, the verify capability to determine the feature status and the forward to number.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS27

* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFBL/DA - Customer Control on each line if desired.

3. The maximum number of digits that can be programmed are: 1A ESS - 16 digits

   5ESS - 24 digits

   DMS-100 - 24 digits

4. Subscribers may have CFBL with CFDA, Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. In the 1A ESS Call Waiting takes precedence and does not interact with CFBL. Un-answered Call Waiting calls do not revert to CFDA in either the 1A ESS or the 5ESS.

5. References:

   • TR-TSY-000586, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1450, Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding Don't Answer After Call Waiting (CFDA After CW) (1093)

Call Forwarding Don't Answer After Call Waiting is a central office software capability that allows a client to utilize the Call Forwarding Don't Answer (CFDA) feature even though the client's line is also equipped with Call Waiting (CW).

CFDA/CW interaction was initially designed for CW to be dominant over CFDA. For a busy line equipped with both features (CFDA and CW), receiving an incoming call invoked the CW tone, but did not transfer to the CFDA forward-to number. This resulted in the CFDA feature being effective only when the line was not busy and not answered.

This capability improves the call waiting feature by allowing subscribers with the call waiting feature to specify the way an incoming call is to be treated when a call comes in while the subscriber is currently involved in a call with another party. When the call waiting tone is heard, the subscriber has the following options:

- initiate the standard call-waiting options (ignore, flash to put the existing call on hold and answer the second call, flash to go back to the first call, etc.)

- forward the call to another preselected directory number.

The busy and call forwarding options are selected by the subscriber pressing the appropriate key on a DTMF telephone set.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding Don't Answer After Call Waiting	AM - Alternate Answer After Call Waiting	CNS
	AM - Call Forwarding With Call Waiting	CNS
	BA - Call Forwarding Don't Answer	CNS*
	BS - Call Forwarding Don't Answer	CNS*
	NX - Call Forwarding II	CNS*
	PB - Modification of Call Waiting	CNS
	USW - Call Waiting	CNS

FEATURE OPERATION:

The new feature interaction allows a client to subscribe to both CFDA and CW, and receive the benefits of both features. An incoming call to a busy line will invoke the CW tone. The client can place the existing call on hold and answer the call, or by not answering the call, can allow the CFDA feature to assume control of the new call and transfer it to the CFDA forward-to number.

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* This capability is inherent with Call Forwarding Don't Answer in Switches which have been modified. Check wire center deployment report for availability.

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TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.11	5E7	BCS32

2. This feature is activated on a office basis. The AT&T switches (1A ESS and 5ESS) have a line-by-line override parameter to accommodate any customer situations where the capability may not be desired.

3. In the DMS-100 switch, the feature only affects those CFDA and CW customers served by RES. There is no line-by-line override parameter in the DMS-100 switch.

4. The line specific CFDA features (number of rings, inter/intraoffice forwarding) will operate the same as though the line were on-hook and not answered.

5. Standard CFDA and CW operation applies.

6. References:

  • LSSGR: Call Waiting, FSD-01-02-1201, TR-TSY-000571, Issue 1 - October 1989, Revision 1 - June 1991 [includes CFDA interaction]

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Don't Answer Intraswitch (1050)

Call Forwarding Don't Answer (CFDA) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is not answered after a user-specified number of rings (or time interval). The service is activated by a service order. The called number and the redirected number (forwarded-to number) are coded in the central office memory and can only be changed through a service order. The customer may specify the number of rings (or time interval) at the time of the service order. The customer has the option of answering the call prior to its being forwarded, as long as the call is answered within the ringing cycle (time interval) selected. The called number and the redirected number (forwarded-to number) must be in the same central office switch. The service is deactivated, the forwarded-to number changed, or the number of rings (time interval) is changed only by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Don't Answer Intraswitch	AM - Alternate Answering	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Don't Answer	CNS
	NX - Call Forwarding 2	CNS
	PB - Call Forwarding Don't Answer	CNS
	SWB - Call Forwarding Don't Answer	CNS
	USW - Call Forwarding Don't Answer	CNS
	USW - Call Forwarding Busy Line/Don't Answer	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward-to" number and the number of rings (time interval) is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS24

2. Multiline customers can have CFDA on each line if desired.

3. Calls may be forwarded to any telephone number served by the same central office that serves the base station except DID numbers in the 1A ESS. Forwarding to DID numbers in the 1A ESS will be available in generic 1AE10.09*. (* References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.)

4. Subscribers may have CFDA with Call Forwarding Busy Line (CFBL), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFDA, CFDA will take precedence over the CW feature if the station is idle. However, if the station is busy, CW will take precedence and does not allow the CFDA feature to take effect if the waiting call is unanswered.

5. References:

   • Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-TSY-000504).

   • TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Don't Answer Interswitch (1051)

Call Forwarding Don't Answer (CFDA) is a central office software capability that allows a client to have an incoming call redirected to another Directory Number (DN) if the number dialed (the client's number) is not answered after a user-specified number of rings (or time interval). The service is activated by a service order. The called number and the redirected number (forwarded-to number) are coded in the central office memory and can only be changed through a service order. The customer may specify the number of rings (or time interval) at the time of the service order. The customer has the option of answering the call prior to its being forwarded, as long as the call is answered within the ringing cycle (time interval) selected. The called number and the redirected number (forwarded-to number) may be in the same or a different central office switch. The service is deactivated, the forwarded-to number changed, or the number of rings (time interval) is changed only by a service order.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Don't Answer Interswitch	AM - Alternate Answering	CNS
	BA - Fixed Call Forwarding	CNS
	BA - Call Forwarding Busy Line/Don't Answer	CNS
	BS - Call Forwarding Don't Answer	CNS
	NX - Call Forwarding 2	CNS
	PB - Call Forwarding Don't Answer Interswitch	CNS
	SWB - Call Forwarding Don't Answer	CNS
	USW - Call Forwarding Don't Answer (Expanded)	CNS
	USW - Call Forwarding Busy Line/Don't Answer (Expanded)	CNS

FEATURE OPERATION:

This feature is activated/deactivated by a service order. The "forward-to" number and the number of rings (time interval) is also selected and preprogrammed at the time of the service order. (Refer to the capabilities called "Call Forwarding - Busy Line or Don't Answer - Customer Control of Activation/Deactivation" and "Call Forwarding - Busy Line or Don't Answer - Customer Control of Forward-To Number" for the services with customer control.)

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10.09*	5E2(2)	BCS24

   * References to switching system generics that have not yet been released by the vendors are based on our current information about which features are planned for inclusion in those generic releases. If the vendors change the availability of any features for future generic releases that are referenced in this document, the availability of some services may be affected.

2. Multiline customers can have CFDA on each line if desired.

3. Calls may be forwarded to any telephone number, including DID numbers, served by the same or a different central office.

4. The caller may hear multiple call progress tones if the remote DN is busy.

5. Subscribers may have CFDA with Call Forwarding Busy Line (CFBL), Call Forwarding Variable (CFV), and Call Waiting (CW). If a station has CFV and CFBL or CFDA active, then CFV will override the CFBL and/or CFDA features. If a station has CW and CFDA, CFDA will take precedence over the CW feature if the station is idle. However, if the station is busy, CW will take precedence and does not allow the CFDA feature to take effect if the waiting call is unanswered.

6. References:

- Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-TSY-000504).

- TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Multiple Simultaneous Calls Interswitch (1052)

This feature provides the capability to specify the number of simultaneous incoming calls to forward from the same number to a hunt group or equivalent arrangement such as DID when the forwarding number and the hunt group (or equivalent) are served by a different central office switch.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Multiple Simultaneous Calls Interswitch	AM - Busy Line Transfer of Alternate Answer	CNS
	BA - Call Forwarding-Multiple Simultaneous Calls Interswitch	CNS
	BS - Call Forwarding Variable Multiple Simultaneous Calls	CNS
	BS - CF BL/DA Multiple Simultaneous Calls	CNS
	NX - Call Forwarding Variable	CNS
	PB - Call Forwarding Variable	CNS
	SWB - Simultaneous Call Forwarding	CNS
	USW - Call Forwarding Variable	CNS

FEATURE OPERATION:

The maximum number of multiple simultaneous call forwarding is Telephone company defined on a per line basis, and on the basis of the type of call forwarding, at the time of service order entry.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	5ESS	DMS-100
Earliest Generic Release	5E2(2)	BCS28

2. This capability is available for the Call Forwarding Variable (CFV), Call Forwarding Busy Line (CFBL) and Call Forwarding Don't Answer (CFDA) features.

3. In the 5ESS switch the number of simultaneous calls allowed can range in size from one to ninety-nine. In the DMS-100 the size can range from 1 to 1024 via the Residential Enhanced Services.

4. In the DMS-100 switches, there may be some limitations on providing this for CFBL or CFDA depending on the current Generic program of the serving central office.

5. Reference for Call Forwarding Variable:

   • TR-TSY-000580, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1401 Call Forwarding Variable, Issue 1, October 1989.

   • TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

Call Forwarding - Variable (1053)

This capability provides the ESP's client with the ability to forward all calls to a second directory number for handling. As part of the activation of the feature, an associated call is placed to the ESP's forward-to number.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Variable	AM - Call Forwarding Variable	CNS
	BA - Call Forwarding	CNS
	BS - Call Forwarding Variable	CNS
	NX - Call Forwarding	CNS
	PB - Call Forwarding Variable	CNS
	SWB - Call Forwarding	CNS
	USW - Call Forwarding Variable	CNS

FEATURE OPERATION:

To activate call forwarding variable with the ESP's number as the forward-to number, the ESP's client dials the call forwarding variable activation code. A recall dial tone (stutter dial tone) is provided, and then the ESP's client dials the ESP's number. When the ESP answers the call, activation is complete. (If the ESP does not answer, the customer may repeat the process within a specified amount of time, e.g., one minute, and the feature will be activated.) Depending on the type of central office switch serving the ESP's client, while call forwarding variable is active, the ESP's client's line will receive a reminder ring whenever a call is forwarded.

To deactivate the feature, the ESP's client dials the call forwarding variable deactivation code.

When call forwarding variable is active, the ESP's client's ability to originate calls will be unaffected.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS23

2. Call Forwarding Variable will override Call Forwarding Don't Answer and Call Forwarding Busy Line if all three features are active at the same time.

3. Calls may be forwarded to any telephone number including DID numbers served by the same or a different central office.

4. References:

- TR-TSY-000580, Module of LSSGR FR-64 (formerly FR-NWT-000064), FSD 01-02-1401 Call Forwarding Variable, Issue 1, October 1989.

- TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Call Forwarding - Variable - Activation Without Courtesy Call (1054)

This capability provides the ESP's client with the ability to activate the call forwarding variable (forward all calls) feature without completing a call to the ESP's forward-to number.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Variable - Activation Without Courtesy Call	AM - Call Forwarding Variable	CNS
	BA - Call Forwarding-Variable-Activation Without Courtesy Call	CNS
	BS - Remote Access - Call Forwarding Variable	CNS
	NX - CallAbility[SM] Feature Access	CNS
	PB - Call Forwarding Variable	CNS
	USW - Call Forwarding Variable Without Call Completion	CNS

FEATURE OPERATION:

To activate call forwarding variable with the ESP's number as the forward-to number, the ESP's client either dials the call forwarding variable activation code of the form *XX or an access number.

1. Dialing an activation code (i.e., Ameritech, Bell Atlantic, BellSouth, Pacific Bell and U S WEST). A recall dial tone (stutter dial tone) is provided, and then the ESP's client inputs the ESP's number by dialing it. If the activation can be accomplished for the designated forward-to address, then the switch responds with confirmation tone.

2. Dialing an Access Number (i.e., NYNEX). The customer dials an access number (e.g., an 800 number or a regular NPA-NXX-XXXX number) from any station. An announcement is returned asking for the customer directory number and a security code. If the dialed directory number and security code match and the customer subscribes to the service a prompt to select the feature (e.g., CFV) and the specific action (i.e., activation) is returned. After making the change the customer can wait for a confirmation or use, at any time, the verify capability to determine the feature status and forward to number.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	5ESS
Earliest Generic Release	5E2(2)*

* Requires Business and Residence Custom Service (BRCS).

2. When call forwarding variable is active, the ESP's client's ability to originate calls will be unaffected.

3. References:

   • TR-TSY-000586, FSD 01-02-1450 Call Forwarding Subfeatures, Issue 1, July 1989

   • TR-TSY-000580 Call Forwarding Variable FSD 01-02-1401, Issue 1, October 1989.

[SM] CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.
UPDATED 7/31/98

Call Forwarding - Variable - Remote Activation/Control (1055)

This capability gives the ESP's client the ability to activate or deactivate the call forwarding variable (forward all calls) feature from remote locations other than their base station. The signaling used to activate or deactivate the call forwarding feature from the remote location must be from a Dual Tone Multi- Frequency(DTMF) set.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding - Variable - Remote Activation/Control	AM - Call Forwarding - Variable - Remote Activation/Control	CNS
	BA - Ultra Forward	CNS
	BS - Remote Activation of Call Forwarding	CNS
	NX - CallAbility^{SM} Feature Access	CNS
	PB - Call Forwarding-Variable-Remote Activation/Control	CNS
	SWB - Remote Activation of Call Forwarding	CNS
	USW - Remote Access Forwarding	CNS

FEATURE OPERATION:

The ESP's client has two options for changing the forward-to number from a remote station:

1. The remote activation of call forwarding variable feature provides a dedicated directory number that can be used for remote activation (i.e., Ameritech, Bell Atlantic, BellSouth, Pacific Bell, Southwestern Bell). A caller may place a call to this remote activation directory number from any station. Calls to this number are answered with a tone or announcement. The caller then dials, on a DTMF station from his/her remote location, his/her home (base station) directory number and a security code. If the dialed directory number and security code match and that customer subscribes to remote activation, confirmation tone followed by dial tone is returned. The customer then proceeds through the call forwarding activation/deactivation procedure as if at home (at the base station).

2. Dialing an Access Number (i.e., NYNEX, U S WEST). The customer dials an access number (e.g., an 800 number or a regular NPA-NXX-XXXX number) from any station. An announcement is returned asking for the customer directory number and a security code. If the dialed directory number and security code match and the customer subscribes to remote activation, a prompt to select the feature (e.g., CFV) and the specific action (e.g., activation or deactivation) is returned. After entering their selection, the customer can wait for a confirmation or use, at any time, the verify capability to determine the feature status and the forward to number.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS*	5ESS*	DMS-100*
Earliest Generic Release	1AE10	5E5	BCS28

Note: * This service may be provided via a switching feature in the switch or via an adjunct processor.

2. Reference:

- Module of LSSGR FR-64 (formerly FR-NWT-000064 & formerly TR-NWT-000504)

Call Forwarding With Variable Rings (1102)

In the event that the called telephone number is not answered within a designated parameter, normally three to four rings, the Call Forwarding Don't Answer feature automatically forwards incoming calls to a predetermined, dialable telephone number served by the same central office switch, or provides interswitch forwarding to a predetermined, dialable telephone number. This feature provides the ability to change the operative number of rings prior to call forwarding.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding With Variable Rings	AM - Customer Changeable Number of Rings	CNS
	BA - Ring Count Change	CNS
	NX - CallAbility^{SM} Feature Access	CNS

FEATURE OPERATION:

This feature is modified on a line basis by a service order. The number of rings (time interval) is selected at the time of the service origination or at any time the customer requests a change.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1.   This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE11.03	5E6	BCS 29

2.   The minimum and maximum number of rings (time interval) is limited on a per switch basis. The normal time range is 0 to 60 seconds.

3.   Reference:

•   GR-1520, Ring Control, Issue 2, October 1994 (component of FR-64)

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^{SM} CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.
UPDATED 7/31/98

Call Forwarding With Variable Rings (1102)

In the event that the called telephone number is not answered within a designated parameter, normally three to four rings, the Call Forwarding Don't Answer feature automatically forwards incoming calls to a predetermined, dialable telephone number served by the same central office switch, or provides interswitch forwarding to a predetermined, dialable telephone number. This feature provides the ability to change the operative number of rings prior to call forwarding.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Forwarding With Variable Rings	AM - Customer Changeable Number of Rings	CNS
	BA - Ring Count Change	CNS
	NX - CallAbility^{SM} Feature Access	CNS

FEATURE OPERATION:

This feature is modified on a line basis by a service order. The number of rings (time interval) is selected at the time of the service origination or at any time the customer requests a change.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE11.03	5E6	BCS 29

2. The minimum and maximum number of rings (time interval) is limited on a per switch basis. The normal time range is 0 to 60 seconds.

3. Reference:

- GR-1520, Ring Control, Issue 2, October 1994 (component of FR-64)

SM CallAbility is a registered service mark of NYNEX. CallAbility will be offered from selected digital switches.

Call Waiting - Cancel (1056)

Cancel Call Waiting allows a subscriber with the Call Waiting feature to inhibit reception of the Call Waiting Tone for the duration of a single call. This prevents interruption of data traffic or interruption during an important telephone call.

Generic Name of ONA Service	Product Name	BSE or CNS
Call Waiting - Cancel	AM - Call Waiting	CNS
	BA - Tone Block	CNS
	BS - Call Waiting	CNS
	NX - Cancel Call Waiting	CNS
	PB - Call Waiting	CNS
	SWB - Cancel Call Waiting	CNS
	USW - Call Waiting	CNS

FEATURE OPERATION:

1. When a subscriber with the Call Waiting Feature wishes to cancel the Call Waiting feature during the call, they must depress the receiver button, listen for dial tone, and dial Star (*) plus 70 for touchtone (DTMF) phones or dial 1170 for rotary dial (DP) phones (Cancel Call Waiting Code) for a POTS line or a Business Group line. After dialing the code, the subscriber listens for confirmation tone and is then automatically reconnected to the call in progress. The Call Waiting feature has then been deactivated and no interruptions are allowed during the call.

2. When a subscriber with the Call Waiting Feature wishes to cancel the Call Waiting Feature prior to making a call, they must lift the receiver, listen for dial tone, and dial Star (*) plus 70 for touchtone (DTMF) phones or dial 1170 for rotary (DP) phones (Cancel Call Waiting Code) for a POTS line or a Business Group line. After dialing the code, the subscriber listens for confirmation tone followed by dial tone. The Call Waiting Feature has then been deactivated and no interruptions are allowed during the call.

3. Call Waiting will be re-established when the call is terminated.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS24

2. Call Forwarding Variable is compatible with Call Waiting and Cancel Call Waiting service.

3. Call Hold and Call Waiting with the Cancel option can be assigned to the same line.

4. Call Pickup and Call Waiting with the Cancel option can be assigned to the same line.

5. Speed Calling and Call Waiting with the Cancel option can be assigned to the same line.

6. Call Waiting with the Cancel option may be assigned to either or both parties on a Two-Party Line.

7. Cancel Call Waiting may not be provided on the following lines:

   • Coin Lines

   • Denied Originating Lines

   • Four and Eight Party Lines

   • PBX Lines

   • Hotel/Motel Calls Routed to TSPS

8. References:

   • TR-TSY-000572, Module of LSSGR FR 64 (formerly FR-NWT-000064), FSD 01-02-1204 Cancel Call Waiting, Issue 1, July 1989, Revision 1, October 1993.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

Called Directory Number Delivery via DID (1057)

This service allows the central office switch to deliver all or part of the destination address to the ESP at the time the call is established. Usually, the destination address delivered is the same as the number originally dialed. When number translations have occurred, e.g., 800 calls, the DID number delivered is not the called number.

Generic Name of ONA Service	Product Name	BSE or CNS
Called Directory Number Delivery via DID	AM - Direct Inward Dialing Trunk Termination	BSE
	BA - Direct Inward Dialing Service	BSE
	BS - Direct Inward Dialing	BSE
	NX - DID	BSE
	PB - Direct Inward Dial Service	BSE
	SWB - Direct Inward Dialing	BSE
	USW - Called Directory Number Delivery (DID)	BSE

FEATURE OPERATION:

1. Customers order this service from the telephone company. A client calling a customer is generally unaware that the customer has Direct Inward Dialing (DID) service. The client is not required to perform any additional actions to have the call delivered via a DID trunk group.

2. In a PBX type application, the service allows a client to reach a specific PBX station without the assistance of an attendant or other intermediary.

3. The number of digits forwarded by the central office switch is determined at the time the service is ordered. The customer must also arrange for a block of telephone numbers to be associated with the DID trunks.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS17

2. A customer may elect to receive Dial Pulse or Dual Tone Multifrequency (DTMF) signaling when using analog facilities. Some companies may offer Multifrequency (MF) outpulsing/signaling to the ESP community. If both the central office switch and the customer's equipment are digital, the customer may be able to order DID trunks with digital connectivity.

3. This service is an incoming service (to the customer's CPE) and is typically a "trunk side" service.

4. References:

   • TR-TSY-000524, Module of LSSGR FR-64 (formerly FR-NWT-000064), Attendant and Customer Switching System Features, Issue 2, July 1987, Revision 1, April 1991.

This service, if offered as a BSE, may be associated with the Circuit Switched Line or Trunk basic serving arrangement, as stated in the individual ONA plans.

Called Directory Number Delivery via ISDN Q.931 *

* A waiver for Switched Access Feature Group K service was denied by the FCC, in CC Docket 89-79, Order dated 7/11/91. As a result, Southwestern Bell Telephone Company was unable to file a tariff on Called Directory Number Delivery via ISDN Q.931.

Called Directory Number Delivery via 900NXX (1059)

This capability will provide the ESP with the directory number that terminated the call via a circuit switched trunk access arrangement. The method used is 900NXX dialing and Feature Group D (FG D) signaling protocol. The called directory number information (900NXXXXXX) is included within the FG D signaling protocol. The assignment of a 900NXX number to each ESP provides the ESP the capability to assign up to 9999 line numbers. With this capability, the FG D signaling protocol would deliver the specific dialed line number (900NXXXXXX) to the ESP.

Generic Name of ONA Service	Product Name	BSE or CNS
Called Directory Number Delivery via 900NXX	AM - Called Directory Number Delivery	BSE
	BA - 900 Access Service	BSE
	NX - 900 Access Service	BSE
	SWB - Circuit Switched - Trunk Side Alternative D Basic Serving Arrangement (BSA-D)	BSA*

FEATURE OPERATION:

This feature is activated/deactivated by an Access Service Order.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS17

2. The service is LATA wide and can be accessed either at the tandem or at the end office. Both access arrangements must be properly equipped with Feature Group D protocol trunks to the 900NXX serving carrier.

3. Calls that originate from non-FG D protocol offices will be handed off to the ESP at the access tandem using the FG D protocol.

4. References:

   • Feature Group D protocol is described in LSSGR FR-64 (formerly FR-NWT-000064), GR-690, Exchange Access Interconnection FSD 20-24-0000, Issue 2, September 1995, Revision 1 - October 1996 (replaces TR-NWT-000690.

   • GR-334-CORE Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994 (replaces TR-NWT-000334).

This service is associated with the Circuit Switched Trunk basic serving arrangement.

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* For Southwestern Bell Telephone Company, this is an inherent feature of Circuit Switched - Trunk Side Alternative D Basic Serving Arrangement (BSA-D) service.

Calling Billing Number Delivery - FG B Protocol (1060)

This arrangement allows the ESP to receive the billing number (ANI - 7 digit) of the party who originated the call to the ESP with the signaling information that is transmitted to the ESP during call setup. This signaling information will be transmitted using a Feature Group B protocol over a direct circuit switched trunk side connection.

Generic Name of ONA Service	Product Name	BSE or CNS
Calling Billing Number Delivery - FG B Protocol	BA - Automatic Number Identification (ANI) - Trunk Side BSA-950 Option	BSE
	BS - Called/Calling Number Information - ANI Via FG B/TSBSA Technical Option 1 [*]	BSE
	NX - Automatic Number Identification	BSE
	USW - Automatic Number Identification	BSE

FEATURE OPERATION:

1. An ESP's client will dial (1)+950+0XXX or (1)+950+1XXX to reach the ESP. The XXX is the ESP's Carrier Identification Code (CIC).

2. ESP equipment may need to prompt the end user (e.g., via second dial tone) for additional information in order for the ESP to process the call.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS19

2. ESPs that purchase trunk side access service utilizing FG B protocol will be assigned a Carrier Identification Code (CIC) and must establish a Point of Presence (POP) in each LATA served. The CIC code will be the same for both FG B protocol and FG D protocol. However, in the future, CIC codes for trunk side access services utilizing FG B protocol and FG D protocol may be assigned independently.

3. ESPs must order direct trunks between each FG B protocol end office switch they wish to serve and their POP. The ANI optional feature must be ordered on all trunks. (Calling Billing Number Delivery - FG B Protocol cannot be provided using tandem arrangements, as the tandems utilizing FG B protocol do not have the ability to pass ANI.)

4. The ANI data forwarded to the ESP consists of the seven (7) digit billing number of the station originating the call and one ANI information digit.

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[*] BellSouth will only offer this service on an interLATA basis.

5. Destination code information, such as the called number, may be transmitted to the ESP from rotary stations provided the ESP orders the Rotary Dial Station Signaling option. This feature is available only from suitably equipped end offices.

6. Calls may be forwarded to ESPs using call forwarding services.

7. This service may be available in other switches equipped for Equal Access service.

8. References:

   • TR-TSY-000698 Feature Group B FSD 20-24-0300, Issue 1, June 1989, Rev. 1, July 1990.

   • TR-NPL-000175 Compatibility Information for Feature Group B Switched Access Service, Issue 1, July 1985.

   • GR-334-CORE Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994.

This service, if offered as a BSE, is associated with the Circuit Switched Trunk basic serving arrangement.

Calling Billing Number Delivery - FG D Protocol (1061)

This arrangement allows the ESP to receive the billing number (ANI - 10 digit) of the party who originated the call to the ESP with the signaling information that is transmitted to the ESP during call setup. This signaling information will be transmitted using a Feature Group D protocol over a circuit switched trunk side connection.

Generic Name of ONA Service	Product Name	BSE or CNS
Calling Billing Number Delivery - FG D Protocol	AM - Calling Billing Number Delivery (i.e., ANI)	BSE
	BA - Automatic Number Identification (ANI) - Trunk Side BSA - 10XXX Option	BSE
	BS - ANI	BSE
	NX - Automatic Number Identification	BSE
	PB - Automatic Number Identification	BSE
	SWB - Automatic Number Identification	BSE
	USW - Automatic Number Identification	BSE

FEATURE OPERATION:

1. An ESP's client that is presubscribed to that ESP will dial (1) + 7/10 digits to reach the ESP. If the ESP's client chooses another carrier as his/her presubscribed carrier, the ESP's client would dial 10XXX (and/or 101XXXX) + (1) + 7/10 digits or 10XXX (and/or 101XXXX)+# to reach the ESP. The XXX (and/or XXXX) would be the ESP's Carrier Identification Code (CIC).

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. ESPs that purchase trunk side access service utilizing FG D protocol will be assigned a Carrier Identification Code (CIC) and must establish a Point of Presence (POP) in each LATA served.

2. ESPs may order (1) direct trunks between each equal access switch and the ESP's POP, or (2) trunks between FG D protocol equal access tandems and the ESP's POP, or (3) a combination of direct and tandem trunks. The trunks must be ordered with the ANI feature where ANI is an optional feature, in order for the ESP to receive the calling billing number.

3. Calls may be forwarded to the ESP using call forwarding services.

4. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE8A	5E2(2)	BCS19

5. The service may be available in other switches equipped for Equal Access service.

6. This service may be available with CCS7 protocol.

7. References:

   - LSSGR FR-64 (formerly FR-NWT-000064), GR-690, Exchange Access Interconnection FSD 20-24-0000, Issue 2, September 1995, Rev 1 - October 1996 (replaces TR-TSY-000690).

   - TR-NPL-000258 Compatibility Information for Feature Group D Switched Access Service, Issue 1, October 1985.

   - GR-334-CORE Switched Access Service: Transmission Parameter Limits and Interface Combinations, Issue 1, June 1994 (replaces TR-NWT-000334, Issue 3).

8. References for CCS7:

   - GR-905 Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (MTP), and ISDN User Part (ISDNUP), Issue 2, December 1996, Revision 1 - December 1997 (replaces TR-TSV-000905, Issue 2).

   - GR-394 Switching System Generic Requirements for Interexchange Carrier Interconnection Using the Integrated Services Digital Network User Part (ISDNUP), Issue 2, December 1997 (replaces TR-NWT-000394, Issue 4).

This service, if offered as a BSE, is associated with the Circuit Switched Trunk basic serving arrangement.

Calling Billing Number Delivery - via ISDN Q.931 Protocol *

* A waiver for Switched Access Feature Group K service was denied by the FCC, in CC Docket 89-79, Order dated 7/11/91. As a result, Southwestern Bell Telephone Company was unable to file a tariff on Calling Billing Number Delivery via ISDN Q.931.

Calling Directory Number Delivery - via ICLID (1064)

Calling Directory Number Delivery via Calling Number Delivery (CND) (CLASS^{SM}) allows the subscriber to receive the telephone number of the caller prior to answering the call.

When Calling Number Delivery (CND) is assigned to the subscriber's line, the directory number of the calling party, the time of the call and the date are sent to, and displayed on, the called party's Customer Premises Equipment (CPE) during the first long silent interval of the ringing cycle (between the first and second rings). If the calling party is outside the area in which the service works, the called party's CPE will receive an "O" which in most cases is displayed as "Out of Area" (actual display is the function of the CPE used).

Generic Name of ONA Service	Product Name	BSE or CNS
Calling Directory Number Delivery- via ICLID	AM - Caller ID	CNS
	AM - Caller ID With Call Waiting	CNS
	BA - Caller ID	BSE
	BS - Caller ID	CNS
	NX - Caller ID	CNS
	PB - Caller ID	BSE
	SWB - Caller ID	CNS
	USW - Caller Identification - Number	BSE

FEATURE OPERATION:

The customer must contact the telephone company to have the Calling Directory Number Delivery service activated. Once the translation changes have been made to the customer's line and the customer has installed the appropriate CPE, the calling number, date and time of the call is automatically transmitted to the customer's CPE. If the service is offered on a usage-sensitive basis, the customer has the option of turning the display device on and off by using the service access codes *65 or 1165 for activation and *85 or 1185 for deactivation. If the service is offered on a flat-rate basis, the display device cannot be turned on and off using the access codes.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. This feature is available in the following central office switches:

Switch Type	1A ESS	5ESS	DMS-100
Earliest Generic Release	1AE10*	5E5	BCS28

NOTE: * Available on intraoffice basis with generic 1AE9.

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2. The serving central office switch must be equipped with the appropriate CLASS^{SM} Calling Number Delivery software and hardware. In order for this service to work on an interoffice basis, both the originating and terminating switches must be equipped with the CLASS^{SM} and the Common Channel Signaling (CCS) SS7 software and hardware and the interoffice trunks must be converted to SS7.

3. This service is a "line" service and therefore cannot be assigned to subscribers with trunk terminations (i.e., PBX with DID). This service is also unavailable to multiparty lines, coin terminating and 1A ESS remote switching system (RSS) lines. This service requires on-hook transmission, therefore there may be instances (MFT, Channel Banks) where this service may not work. An exception is Ameritech's offering of "Caller ID With Call Waiting."

4. The subscriber must have a station set or a display device adjunct to the station set capable of receiving and displaying the calling directory number. The subscriber is responsible for the purchase and installation of this display device.

5. If the subscriber answers the telephone during the first ringing interval, the calling directory number will not be displayed at the CPE.

6. References:

   • TR-NWT-000031, CLASS^{SM} Feature: Calling Number Delivery, FSD 01-02-1051, Issue 4, December 1992.

   • GR-30, Voiceband Data Transmission Interface, Issue 1, December 1994 (replaces TR-NWT-000030).

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.

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^{SM} CLASS is a service mark of Bellcore (Bell Communications Research, Inc.)

Carrier Selection On Reverse Charge (1065)

800 Service is a telecommunications service in which any charges for the call are paid by the called party rather than the calling party. Dial access for the service is in the form of 1-800-NXX-XXXX. [Note: 888 is now equivalent to 800.]

The 800 Service subscriber purchases service from particular areas and incurs all the costs associated with processing calls for the calling parties. The unique reverse billing feature provides the calling party with "free" calls, while allowing the 800 Service customer, the called party, to encourage calls from parties of choice.

Generic Name of ONA Service	Product Name	BSE or CNS
Carrier Selection On Reverse Charge	AM - 800 Dialing Alternative	BSA *
	BA - 800 Access Service	BSE
	BS - 800 Service	BSA
	NX - 800	BSE
	PB - 800 Access Service	BSA **
	USW - 800 Service	BSA *

FEATURE OPERATION:

BOC 800 Service provides for the assignment of a single ten digit 800 Number (i.e., 800+XXX+XXXX) to the customer which can be used on a state wide basis for intraLATA calling. The service can be selected for an area consisting of less than an entire state by specifying a desired area of service.

The basic BOC 800 Service to an individual customer consists of the following capabilities:

1. The assignment of a single 800 number, which allows but does not require the subscriber to use one 800 number nationwide.

2. A termination that connects a location specified by the customer to the BOC's switched facilities.

3. Access to a single exchange or interexchange carrier for intraLATA transport.

4. Carrier selection.

5. Customer defined area of service.

6. The offering of national directory assistance listings to be passed to the national directory assistance provider.

TECHNOLOGICAL AND FEATURE INTERACTION CONSIDERATIONS:

1. References:

   • SR-2275, Bellcore Notes on the Networks, Issue 3, December 1997 (replaces SR-TSV-002275, Issue 2)

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* For Ameritech and U S WEST, this is a Circuit Switched Trunk Type BSA alternative.
** For Pacific Bell, this is a Circuit Switched Line Type BSA alternative.

- GR-508, LSSGR: Automatic Message Accounting (AMA) Section 8, (A module of LSSGR FR-64) Issue 2, December 1997 (replaces TR-TSY-000508, Issue 3).

- TR-NWT-000533 Service Switching Points (FSD 31-01-0000), Issue 3, January 1994.

- U S WEST document 77318 Compatibility Information for 800 Service Switched Access, May 1986.

This service, if offered as a BSE, is associated with the Circuit Switched Line basic serving arrangement.